RouteFinder™

USB 11Mbps Wireless Network Adapter

Model RF802USB

User Guide

MultiTech® Systems

User Guide

Multi-Tech Systems, Inc. USB 11 MBPS Wireless Network Adapter

Model RF802USB

PN S0000230 Revision A

Copyright

This publication may not be reproduced, in whole or in part, without prior expressed written permission from Multi-Tech Systems, Inc. All rights reserved.

Copyright © 2001, by Multi-Tech Systems, Inc.

Multi-Tech Systems, Inc. makes no representations or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose. Furthermore, Multi-Tech Systems, Inc. reserves the right to revise this publication and to make changes from time to time in the content hereof without obligation of Multi-Tech Systems, Inc. to notify any person or organization of such revisions or changes.

Revision	Date	Description
A	10/01/01	Initial Release.

Patents

This Product is covered by one or more of the following U.S. Patent Numbers: 6,151,333; 5,757,801; 5,682,386. Other patents pending.

Trademarks

Trademark of Multi-Tech Systems, Inc. is the Multi-Tech logo.
Windows is a registered trademark of Microsoft.

Technical Support

Multi-Tech Systems has an excellent staff of technical support personnel available to help you get the most out of your Multi-Tech product. If you have any questions about the operation of this unit or experience difficulty during installation, you can contact Tech Support via the following:

Country	By Email	By Telephone
France	support@multitech.fr	(33) 1-64 61 09 81
India	support@multitechindia.com	(91) 124-340778
U.K.	support@multitech.co.uk	(44) 118 959 7774
U.S. & Canada	support@multitech.com	(800) 972-2439
Rest of World	support@multitech.com	(763) 785-3500

World Headquarters

Multi-Tech Systems, Inc.
2205 Woodale Drive
Mounds View, Minnesota 55112
(763) 785-3500 or (800) 328-9717
U.S. Fax 763-785-9874

http://www.multitech.com

Contents

CHAPTER 1 - INTRODUCTION 5

YOUR RF802USB PACKAGE 5
WIRELESS NETWORK BASICS 5
SAFETY 6
ACHIEVING OPTIMAL PERFORMANCE 6
LED INDICATORS 7
FOUR WAYS TO USE THE WIRELESS LAN ADAPTER 7

CHAPTER 2 - INSTALLATION OF THE RF802USB 12

INSTALLATION OVERVIEW 12
SOFTWARE INSTALLATION FOR WINDOWS 98/ME/2000 12
CONNECTING THE RF802USB TO YOUR PC OR LAPTOP 13
SETTING NETWORK PROPERTIES IN WINDOWS 98/ME 13
SETTING NETWORK PROPERTIES IN WINDOWS 2000 14

CHAPTER 3 - CONFIGURATION UTILITY 16

STATUS TAB 17
CONFIGURATION TAB 18
ENCRYPTION TAB 20
ABOUT TAB 22

CHAPTER 4 - TROUBLESHOOTING 24

VERIFYING DRIVER INSTALLATION 24
CHECKING THE WIRELESS ADAPTER CONFIGURATION 27

CHAPTER 5 - NETWORKING BASICS 30

COMPUTER IDENTIFICATION 30
SHARING FILES 32
SETTING SHARING LEVELS OF ACCESS 34
TYPES OF ACCESS 34
SHARING PRINTERS 35
SELECTING A SHARED PRINTER 36
HOW TO INSTALL TCP/IP 39
CONFIGURING A DYNAMIC IP ADDRESS 42
CONFIGURING A STATIC IP ADDRESS 45
CHECKING TCP/IP ADDRESS OF THE WIRELESS ADAPTER 47
CHECKING THE CONNECTION BY PINGING 48

APPENDIX A - TECHNICAL SPECIFICATIONS OF THE RF802USB 50

APPENDIX B - UNINSTALL RF802USB SOFTWARE 52

UNINSTALL RF802USB IN WINDOWS 98 52
UNINSTALL RF802USB IN WINDOWS ME 52
UNINSTALL RF802USB IN WINDOWS 2000 53

APPENDIX C - MULTI-TECH SYSTEMS, INC. WARRANTY & REPAIRS POLICIES 54

APPENDIX D – REGULATORY INFORMATION 56

FEDERAL COMMUNICATION COMMISSION INTERFERENCE STATEMENT 56
R&TTE COMPLIANCE STATEMENT 56

INDEX 57

RouteFinder™

Chapter 1
Introduction

MultiTech® Systems

Chapter 1 - Introduction

The Multi-Tech Systems, Inc. USB 11Mbps Wireless Network Adapter provides an ideal way to "connect" your PC or laptop computers to a wireless network or to "connect" as part of a wired network with a wireless network segment. With the wireless adapter, you will have the ability to share information and resources, such as files and printers, and take full advantage of a "connected" environment for work and play!

The Multi-Tech Systems, Inc. product adheres to all industry standards and brings compatible high speed wireless connectivity for use in your home or business.

This User Guide provides an introduction to wireless technology and its application, will assist you with the installation procedure, and give you troubleshooting and basic network information.

Your RF802USB Package

- USB 11Mbps Wireless Network Adapter
- This printed User Guide
- A CD-ROM containing a Wireless Network Management utility, this user guide and drivers. The **Configuration Utility** is used for managing the wireless adapter and establishing the wireless connection with your Local Area Network.

Note: If anything is missing, please contact your vendor.

Wireless Network Basics

A wireless network system offers a great number of advantages over a traditional wired system. Wireless networks are more flexible, are easier to setup and manage, and are often more cost effective than their wired equivalent.

Using radio frequency (RF) technology, wireless networks transmit and receive data over the air, minimizing the need for wired connections. Wireless networks combine data connectivity with user mobility, and, through simplified configuration, enable movable networks.

With wireless networks, users can access shared information without looking for a place to plug in, and network managers can set up or augment networks without installing or moving wires. Wireless networks offer the following productivity, convenience, and cost advantages over traditional wired networks:

Mobility – Wireless network systems can provide their users with access to real-time information anywhere within their organization. This mobility supports productivity and service opportunities not possible with wired networks.

Installation Speed and Simplicity - Installing a wireless network system can be fast and easy and can eliminate the need to pull cable through walls and ceilings.

Installation Flexibility - Wireless technology allows the network to go where wires cannot go.

Reduced Cost-of-Ownership - While the initial investment required for wireless network hardware might be higher than the cost of wired network hardware, overall installation expenses and life-cycle costs will be significantly lower. Long-term cost benefits are greatest in dynamic environments requiring frequent moves, add-ons, and changes.

Scalability - Wireless network systems can be configured in a variety of topologies to meet the needs of specific applications and installations. Configurations are easily changed and range from peer-to-peer networks suitable for a small number of users to full infrastructure networks of thousands of users that allows roaming over a broad area.

Safety

USB equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this manual and of the computer manufacturer must, therefore, be allowed at all times to ensure the safe use of the equipment.

Achieving Optimal Performance

Minimize the Number of Barriers

The number of walls, ceilings, and other objects that the wireless signal must pass through limit the range of wireless network communications. Position your Access Points, Residential Gateways, and computers so that the number of barriers is minimized.

Minimize the Degree of Angles among the Access Points, Residential Gateways, And Computers

Try to position the Access Points and Adapters so that the signal will travel straight through a wall or ceiling for better reception.

If a 45-degree angle exists between an Access Point and a PC with a wall that is .5 meters thick, this 45-degree angle can appear to be almost 1 meter thick. At a 2-degree angle, the barrier can appear to be over 14 meters thick.

Consider the Type of Barrier

Try to position Access Points, Residential Gateways, and Computers so that the signal passes through drywall or open doorways. Other materials, such as solid metal or aluminum studs, may have a negative effect on range.

Position the Antenna for Optimal Performance

The antenna can be adjusted to help improve performance.

Minimize the Amount of Distance from Electrical Devices

Try to maintain a distance of at least 1-2 meters from devices that generate RF noise, like microwaves, monitors, electric motors, etc.

LED Indicators

The Wireless Network Adapter has two indicator lights that can give you information about your network traffic and help you determine problems when troubleshooting.

1. **Power LED** – When this light is on, the adapter is on.
2. **Link** – This light blinks with traffic. The more traffic, the more blinking.

Four Ways to Use the Wireless LAN Adapter

This section covers the different ways in which the Wireless LAN Adapter can be set up and used.

Setup 1 – The Ad Hoc Network
Setup 2 – The Ad Hoc Network with Internet Sharing
Setup 3 – The Home Network with Multiple IPs
Setup 4 – The Home Network with a Residential Gateway, Firewall, or Router.

Setup 1 – The Ad Hoc Network

Use This Setup If:

You have two or more computers and/or laptops and just want to share files and printers.

Steps:

1. Install the Wireless Network Adapter - See the Installation section of this User Guide or the Quick Start Guide.
2. Set Static IP Address for the Wireless Network Adapter - See Networking Basics.
3. Check the wireless connection- See Configuration Utility and Networking Basics.
4. Learn to share printers and file - See Networking Basics.

The Ad Hoc Network

Setup 2 – The Ad Hoc Network with Internet Sharing

Use This Setup If:

You have two or more computers and/or laptops and want to share files, printers, and Internet access using one computer or laptop as an Internet Server.

Additional Requirements:

To share an Internet connection, you will need Internet Sharing software – you can either purchase Internet Sharing software or use Windows 98SE's or ME's Internet Connection Sharing (ICS) utility.

Follow the Internet Sharing software documentation to properly configure your Wireless Network Adapter. However, install the Internet Sharing software after you have installed your Wireless Network Adapter and setup your network

Steps:

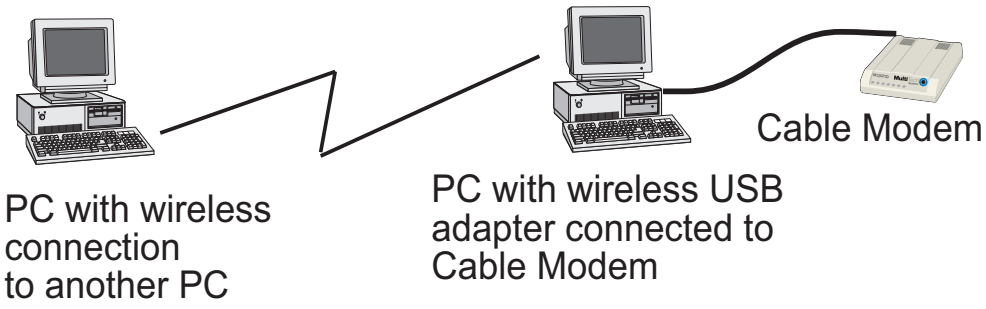
If the Internet Sharing Software will be installed on the same computer into which you are installing this wireless network adapter follow these steps:

1. Install the Wireless Network Adapter - See the Installation section of this guide or the Quick Start Guide.
2. Set Static IP Address for the Wireless Network Adapter - See the Networking Basics.
3. Check the wireless connection- See Configuration Utility and Networking Basics.
4. Learn to share printers and file - See Networking Basics.
5. Install your Internet Sharing Software.

Follow these steps for the computer without the Internet Sharing software:

1. Install the Wireless Network Adapter - See the Installation section of this guide or the Quick Start Guide.
2. Check the IP Address for the Wireless Network Adapter - See the Networking Basics.

   Note: The default settings for the Wireless Network Adapter are set to obtain a Dynamic IP Address.
3. Check the wireless connection- See Configuration Utility and Networking Basics.
4. Learn to share printers and file - See Networking Basics.



The Ad Hoc Network with Internet Sharing

Setup 3 – The Home Network with Multiple IPs

Use This Setup If:

1. You have two or more computers and/or laptops and want to share files, printers, and Internet access using multiple IP addresses that you have purchased from your Internet Service Provider.

   Or

2. You want to connect to an Ethernet network that uses Static IP addresses. This requires an Access Point, an Ethernet capable Broadband modem, and a multiple IP address Internet Account or an existing Ethernet network.

Additional Requirements:

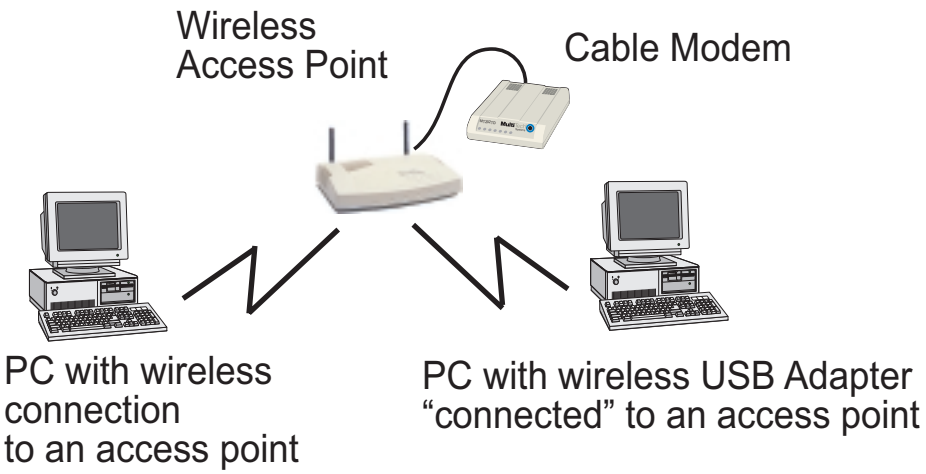
These setup directions are intended for Network Administrators with Static IPs. This type of setup requires that your Internet Service Provider (ISP) or Network Administrator can give you a static IP address for each computer.

You will also have to setup your Access Point. Consult Access Point documentation its installation procedures.

Steps:

1. Using the Ethernet cable provided with your router, connect the router to the Cable/DSLmodem.
2. Connect the Access Point to the Router.
3. Install the Wireless Network Adapter - See the Installation section of this guide or the Quick Start Guide.
4. Check the wireless connection - See Configuration Utility and Networking Basics.
5. Set Static IP Address for the Wireless Network Adapter - See Networking Basics.

   Note: If you are using a PPPoE client, go to Networking Basics. Verify the settings with your ISP or Network Administrator, if necessary.
6. Learn to share printers and files - See Networking Basics.



The Home Network with Multiple IPs

Setup 4 – The Home Internet Network with a Residential Gateway, Firewall, or Router

Use This Setup If:

You have two or more computers and/or laptops and want to share files, printers, and Internet access using a Residential Gateway, Router, or Firewall

Or

You want to connect to an Ethernet network that uses Dynamic (DHCP) IP addresses. This setup requires a 1) a Wireless Router or an Access Point and 2) an Ethernet capable Gateway, Router, or Firewall or an existing Ethernet network.

Additional Requirements:

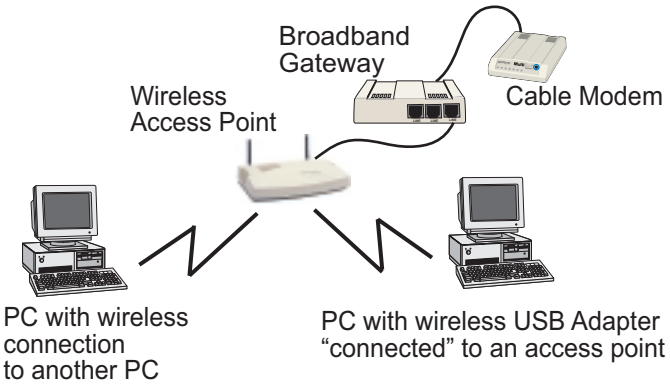
These setup directions are intended for Network Administrators with Dynamic IPs. This type of setup requires that your residential Gateway, Router, Firewall, or Network Administrator give you a dynamic IP address for each computer.

You will also have to setup your Access Point. Consult Access Point documentation its installation procedures.

Steps:

1. Using the Ethernet cable provided with your router, connect the router to the Cable/DSLmodem.
2. Connect the Access Point to the Router.
3. Install the Wireless Network Adapter - See the Installation section of this guide or the Quick Start Guide.
4. Check the wireless connection - See Configuration Utility and Networking Basics.
5. Check the IP Address for the wireless adapter - See Networking Basics.

   Note: The default settings for the Wireless Network Adapter are set to obtain a Dynamic IP Address.
6. Learn to share printers and files - See Networking Basics.



The Home Internet Network with a Residential Gateway, Firewall, or Router

RouteFinder™

Chapter 2
Installation

MultiTech® Systems

Chapter 2 - Installation of the RF802USB

The following section will assist you in installing the RF802USB Wireless Network Adapter successfully. First, you will install the driver (from the CD-ROM included with your package). Second, you will connect the Wireless Network Adapter. Then, you will set the network properties to accommodate resource sharing. Finally, you will configure the Adapter.

Installation Overview

A Pre-Installation Note: Make sure that the router, the RF802EW, to which you will be "connected" is in place.

How the RF802EW Works With Your RF802USB: The RF802EW connects with cables to the Internet and your local area network (Network). It is the **wireless access point** for your RF802USB. Your RF802USB "connects" wirelessly to the RE802EW.

Installation: Here is a summary of the steps you will perform in establishing your wireless network connection:

1. Install the RF802USB software using the installation CD-ROM included with your package.
2. Connect the RF802USB to your PC.
3. Configure your RF802USB.
4. Set the network protocol(s) required to communicate on your network. In most instances, you will be using the TCP/IP protocol.

Software Installation for Windows 98/Me/2000

These steps provide a quick summary of the software installation process. For detailed installation steps with screen shots, see the chapter entitled **Network Basics**.

Note: Some of these steps may vary in Windows 2000. For specific information click **Start** > **Help**.

1. Power on your computer and allow **Windows** to load fully.
2. Be sure that there is no wireless **USB** connected to your computer yet.
3. Insert the given **Installation CD**. The **Welcome/Setup** screen displays. Click **Next**.
4. Accept the license agreement. Click **Next**.
5. The **Choose Destination Location** screen displays. Enter the path of the destination folder; or to set the path of your choice, click **Browse**. Then click **Next**.
6. The **Setup** program will add an icon to the Program Folder. You may type a new folder name or select one from the existing Folder list.
7. It takes a few seconds for the utility files to be copied. Then click **Finish**.

Connecting the RF802USB to Your PC or Laptop

1. Plug a USB cable into the RF802USB and your PC or laptop.
2. A wizard will locate the new hardware (your RF802USB). Choose Display a list of the known drivers for this device so that I can choose a specific driver. Then click Next.
3. Select **Hardware Types**, and then click **Next**.
4. Click **Wireless USB**.
5. Click **Have Disk**. Place the CD in your CD-ROM drive.
6. Then enter the path name E:\ (where E is the CD-ROM drive of your laptop computer or PC). The driver files will be copied to this location. Then click **OK**.

Setting Network Properties in Windows 98/Me

These steps provide a quick summary of the setting Network Properties process. For detailed installation steps with screen shots, see the chapter entitled **Network Basics**.

Note: See the steps for Windows 2000 Network Properties below.

1. Right-click **Network Neighborhood** from the desktop.
2. Select **Properties** from the context menu. The **Network** dialog box displays and presents three main tabs: **Configuration**, **Identification**, and **Access Control**.
3. Click the **Configuration** tab.
4. Click the **Add** button.
5. The **Select Network Component Type** dialog box displays.
6. Click **Protocol,** and then click the **Add** button.
7. The **Select Network Protocols** dialog box displays.
   7a. From the list of manufactures, click on **Microsoft**.
   7b. From the **Network Protocols** list, select **TCP/IP**, and then click **OK**.
8. The **TCP/IP** protocol is now installed. Click **OK,** and you will be returned to **Network Component Type** dialog box.
9. Click the **TCP/IP** option for setting the **IP** address for your computer.
10. You can select either the **Static** or **DHCP** setting.
    - If you use the **Static IP** setup, then enter the **IP** value, **Subnet** masking, **DNS**, **Domain**/**Workgroup** name, and **Gateway** Address values.
11. After setting these parameters, click **OK** to return to **Network Component Type**.
12. You can now select the **File and Printer Sharing** options as well as the **Access** to your computer. Access can be set for other users connected to the network by setting the computer sharing options. Click **OK**.
13. The screen message **Do you want to restart your computer** will pop up. Select **Yes**. Your computer will shut down and restart.

Setting Network Properties in Windows 2000

These steps provide a quick summary of the setting Network Properties process. For detailed installation steps with screen shots, see the chapter entitled **Network Basics**.

1. Right-click **My Network Places** from the desktop, and select **Properties** from the context menu.
2. The **Network** dialog box displays. Click **Local Area Connection** → **Properties**.
3. Click the **TCP/IP** option for setting the **IP** address for your computer.
4. You can select either **Obtain an IP address automatically** or **Set your own IP address**.
   - To obtain an IP address automatically, select this option, and the address is automatically set up.
   - To set your own IP address, enter the **IP**, **Subnet Masking**, **DSN server**, and **Default Gateway Address** values. Then click **OK**.
5. You will be returned to the **Network Component Type** dialog box.
6. You can now select the **File and Printer Sharing** options as well as the **Access** to your computer. Access can be set for other users connected to the network by setting the computer sharing options. Click **OK**.
7. The screen message **Do you want to restart your computer** will pop up. Select **Yes**. Your computer will shut down and restart.

RouteFinder™

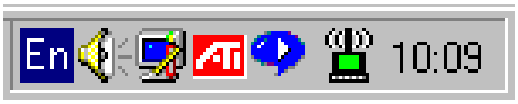
Chapter 3
Configuration Utility

MultiTech® Systems

Chapter 3 - Configuration Utility

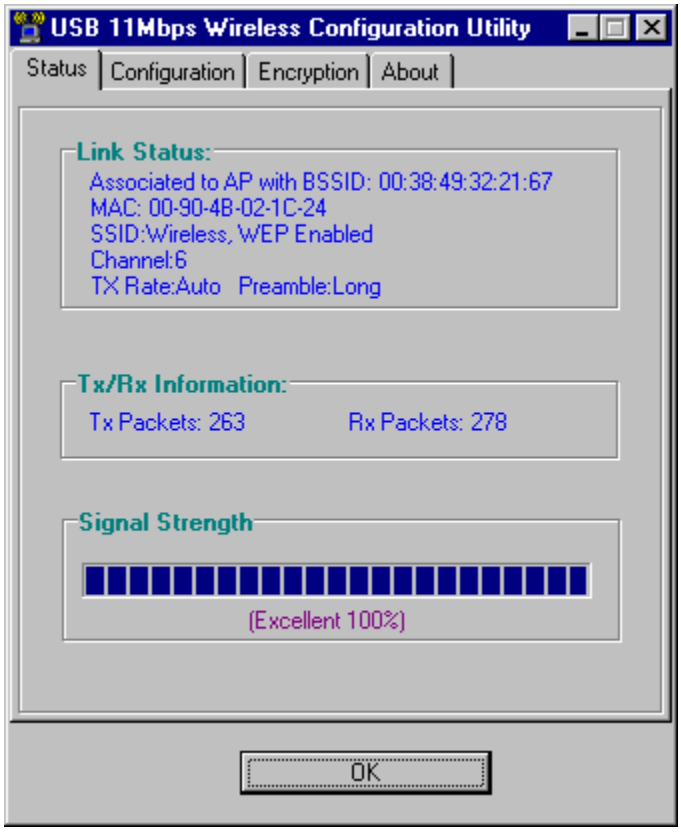
The Wireless Network Adapter uses its own management software. All functions that you can control are provided by the Configuration Utility. Usually this application starts automatically. To start the utility manually, click the **Start** button > **Programs > USB 11Mbps Wireless Network Adapter**.

A new icon should appear in your Icon tray. If this icon is green, the Wireless Network Adapter is configured right. If the icon is red, the Wireless Network Adapter configuration is invalid or incomplete. In this case, re-check your configuration by following the same steps you will use in this chapter to set the initial configuration.



Icon Tray with a New Icon

To start the configuration, double click on the **Wireless Network Adapter** icon. The **USB 11Mbps Wireless Configuration Utility** screen, as shown below, displays.[MT1].



The Configuration Utility Screen with the Status Tab Displayed

A Note about Navigation: You can navigate through the tabs by clicking on the tab. The **OK** button accepts the information and closes the dialog box.
Other ways to navigate in Windows: The **–** button (upper right corner) minimizes the window. The **X** button closes the application.

Status Tab

Link Status Group

When Associated fields are listed, the normal flow of operation is Infrastructure Mode, the PC is connected to its access point, and networking is available. BSSID is shown in the form of hex digits.

Tx/Rx Rate Information Group

The Tx Packets and Rx Packets display the instantaneous wireless Receive and Transmit throughput displayed in bytes per second. These values are updated every two seconds.

Signal Strength

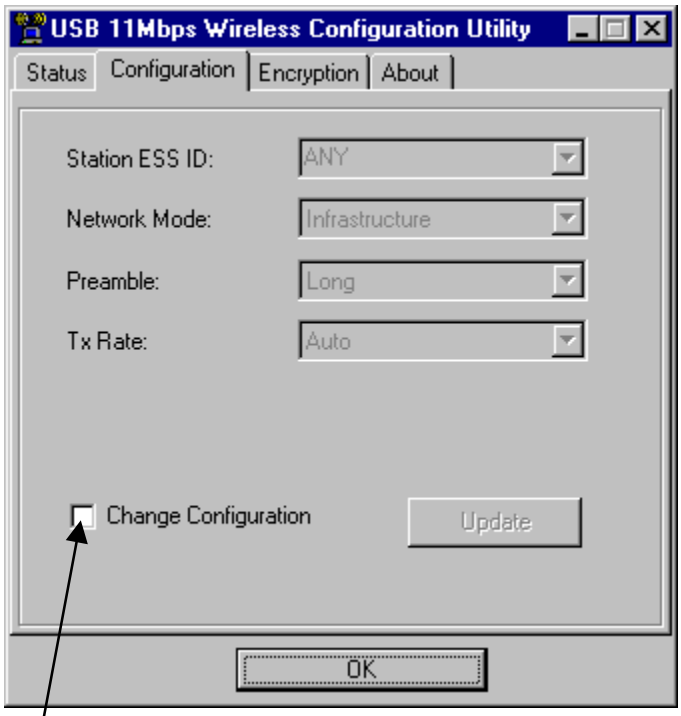
The Signal Strength sliding bar displays the quality of the link between the node and its Access Point. This bar is active only when the node is in Infrastructure Mode. The label under the sliding bar summarizes the quality of the link. The values can be:

No Traffic
Poor
Good
Very Good
Excellent

The driver will start looking for a better Access Point if the Link Quality becomes Poor. Link Quality is a measure of Receive and Transmit Errors over the radio.

Configuration Tab

The fields on the **Configuration Tab** display the operating parameters of the driver. Changes to any of the parameters can be made on this screen. You do not have to reboot the PC when changes on this screen are made.

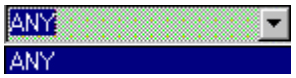


Configuration Utility Screen with Configuration Tab Selected

Change Configuration

To change the current configuration, check the **Change Configuration** box.

Station ESS ID



Extended Service Set Identifier (Wireless Network Identifier) is the group name that will be shared by every member of your wireless network. You will only be able to connect with an Access Point, which has the same ESS ID. The only option is **ANY**.

Network Mode

Two modes are available. The default is **Infrastructure**.

Ad Hoc - This is the 802.11 peer-to-peer mode of operation. In 802.11Ad Hoc only one wireless cell is supported for each different SSID. Communication is Client-to-Client without the use of an Access Point. 802.11 Ad Hoc networking uses the same SSID for establishing the wireless connection.

Infrastructure - This mode of operation requires an 802.11 Access Point. All communication is done via the Access Point, which relays packets to other wireless Clients in the BSS as well as to nodes on a wired network such as Ethernet.

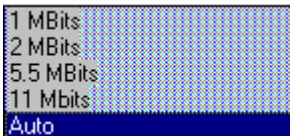
Preamble

Two different Preambles are available. The default is Long.

Long Preamble - The mandatory supported Long Preamble inter-operates with the current 1 Mbit/s and 2 Mbit/s DSSS specification (as described in IEEE Std 802.11).

Short Preamble - The optional Short Preamble is intended for applications where maximum throughput are desired and interoperability with legacy and non-short-preamble capable equipment is not a consideration. That is, the Short Preamble is intended to be used only in networks of like equipment, all of which can handle the optional mode.

TX Rate



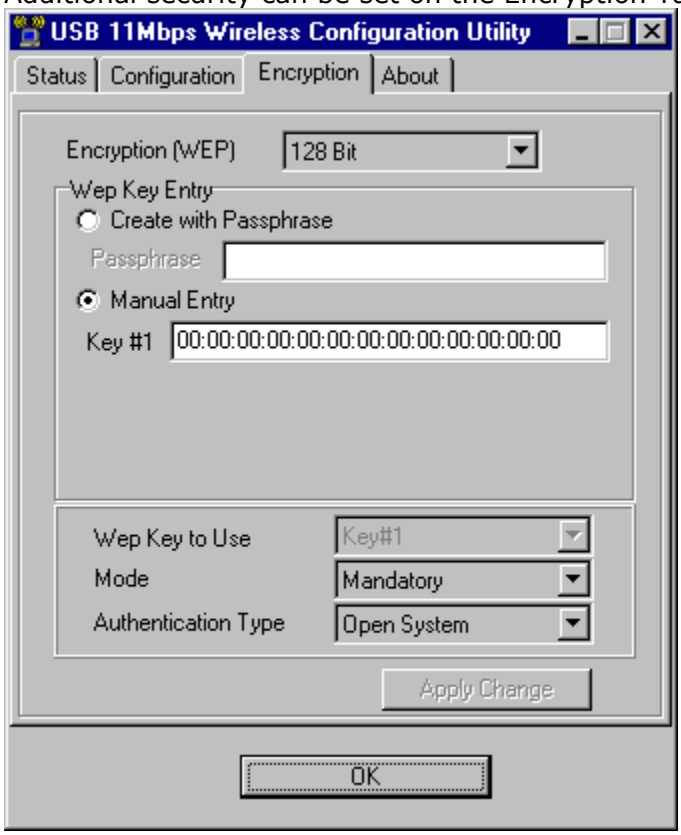
The TX Rate is the transmission rate at which the data packets are transmitted. You can set this to these fixed values: 1Mbps, 2 Mbps, 5.5 Mbps or 11 Mbps. The default is Auto.

Update Button

This button becomes active only when one of the fields has been changed. Click this button to apply the changes to the driver and to save them to the registry for the next time the PC boots up.

Encryption Tab

You may desire an additional measure of security on your wireless network. Additional security can be set on the Encryption Tab.



Configuration Utility with the Encryption Tab Selected

Additional security can be achieved by using WEP (Wired Equivalent Privacy) encryption. WEP encrypts each frame transmitted from the radio using one of the Keys entered from this panel.

When an encrypted frame is received, it will be accepted only if it decrypts correctly, and this will happen only if the receiver has the same WEP Key used by the transmitter.

Encryption (WEP)

Choose either 64 bit or 128 bit from the drop down list box. The default is 128 bit.

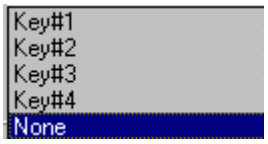
WEP Key Entry

Select either a password (**Passphrase**) or a key (**Manual Entry**) for your WEP encryption.

Create with Passphrase – Enter a password in this field.

Manual Entry - Use this field to manually enter the key code. This may be necessary if you wish to match a key in a different vendor's product. **Note**: The numbers cannot be all zeroes.

WEP Key to Use



Select a key and then enter the keys in the corresponding fields.

Mode

There are two options. The default is **Mandatory**.

Mandatory Mode – This mode is the WEP encryption that should be used. The other station also needs to use WEP encryption in order to establish a communication with your station. This mode is required for compliance with the IEEE 802.11b standard.

Optional Mode - This mode allows your station to communicate with other stations that may or may not use WEP encryption.

Authentication Type

There are two options. The default is **Open System**.

Open System – If the Access Point is using Open System authentication, then the wireless adapter will need to be set to the same authentication.

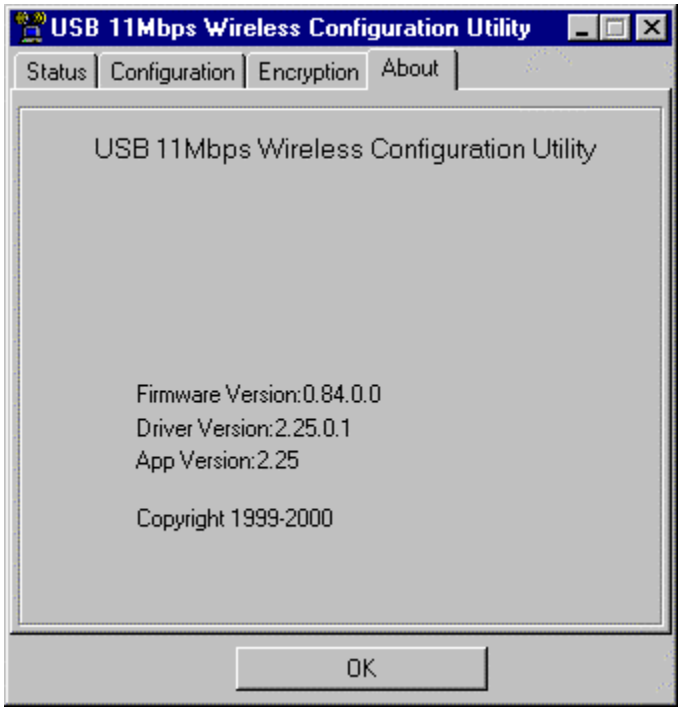
Shared Key – This authentication is available only if WEP encryption is enabled. Shared Key authentication supports authentication of hosts as either a member of a group that shares a secret key or a member of those without a shared secret key. Shared Key authentication requires the use of WEP in order to share the key without transmitting the secret key in the open.

Apply Change

Click this button to apply any changes made to the fields on this screen.

About Tab

The **About Tab** shows the driver version number, the product version number, and the application version number. You must use this version number when reporting problems to Tech Support.



Configuration Utility with About Tab Selected

RouteFinder™

Chapter 4
Troubleshooting

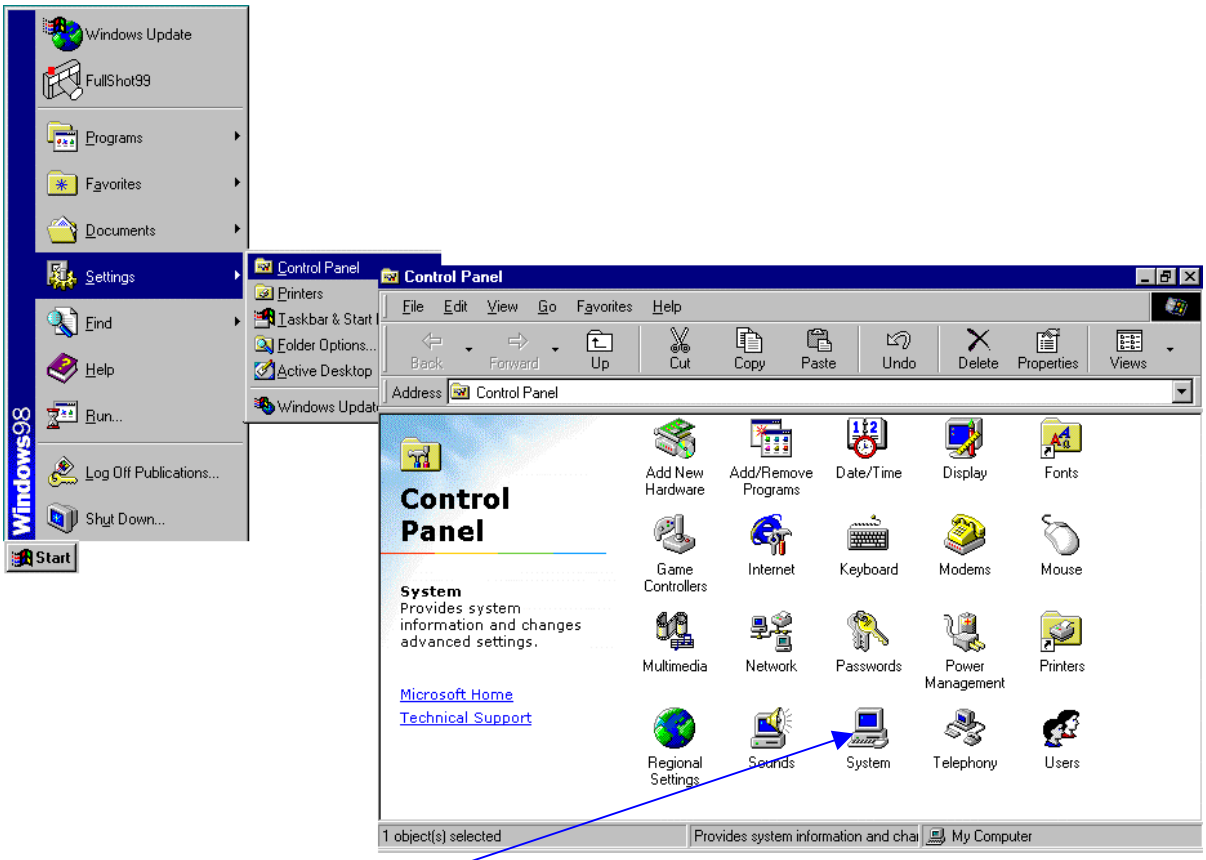
MultiTech® Systems

Chapter 4 - Troubleshooting

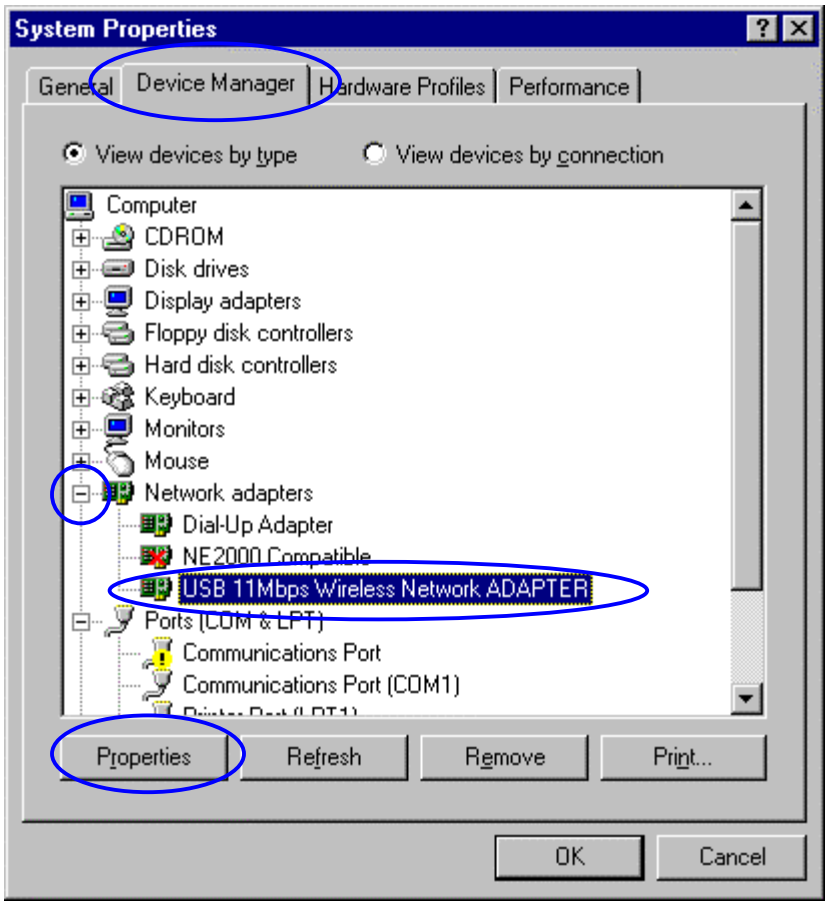
Verifying Driver Installation

To check that the wireless network adapter drivers are loaded properly:

1. Select **Start > Settings > Control Panel**

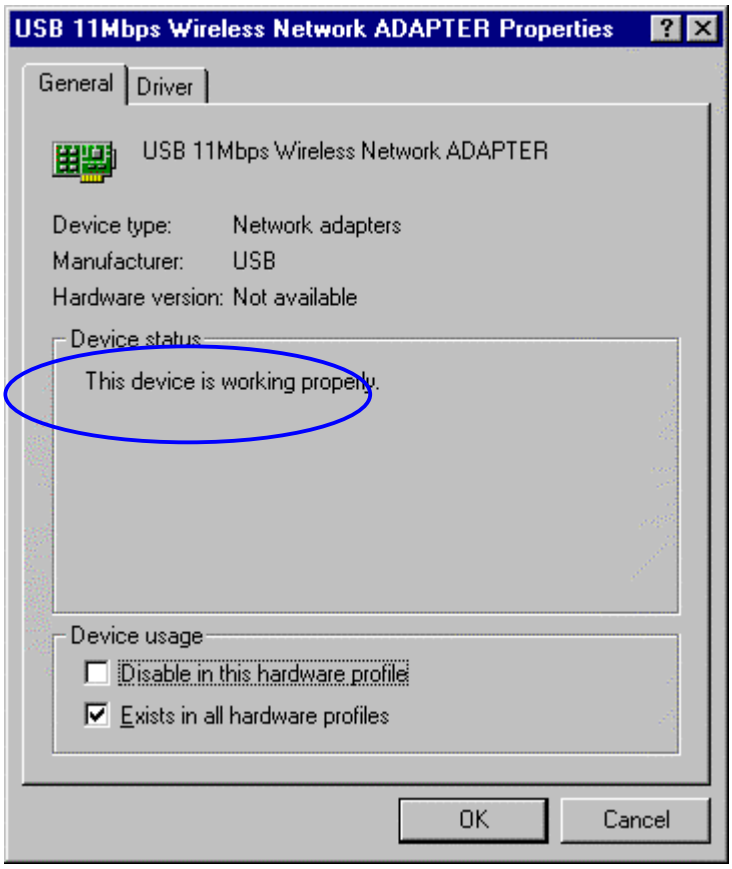


2. Double-click on **System.** The **System Properties** screen displays.



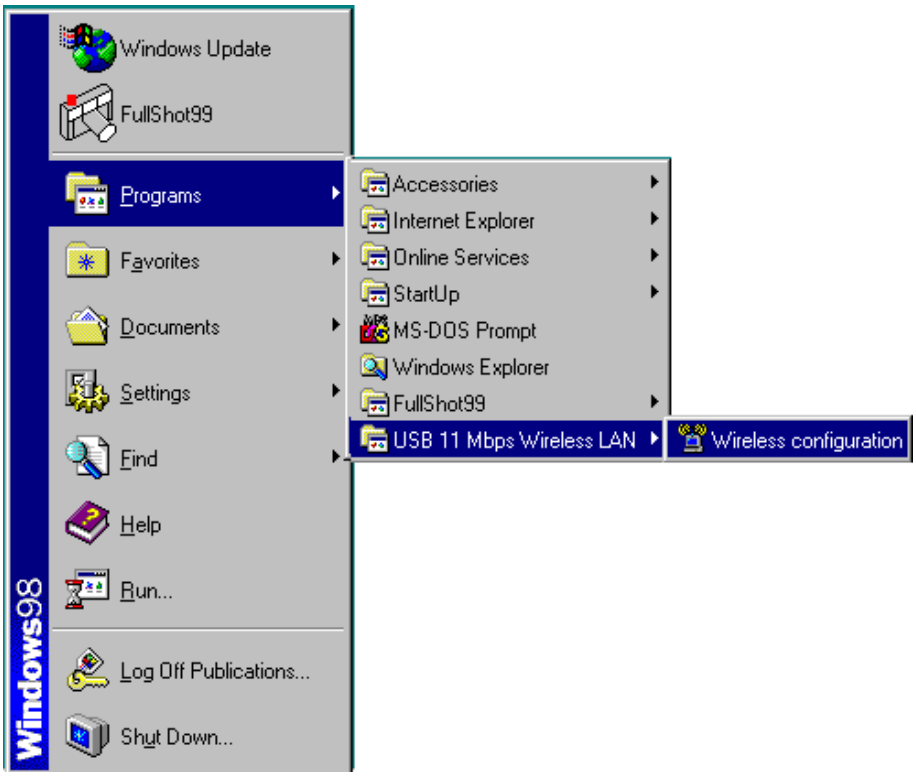
3. Click on the **Device Manager** Tab
4. Click on the **+** symbol in front of **Network Adapters**, which changes to a **–** after it is clicked.
5. Highlight **USB 11MBps Wireless Network Adapter** by clicking on it, and then click the **Properties** button.

6. The **USB 11MBps Wireless Network Adapter Properties** screen displays. Check the **Device Status** to see if the **Wireless Network USB Adapter** is working properly.

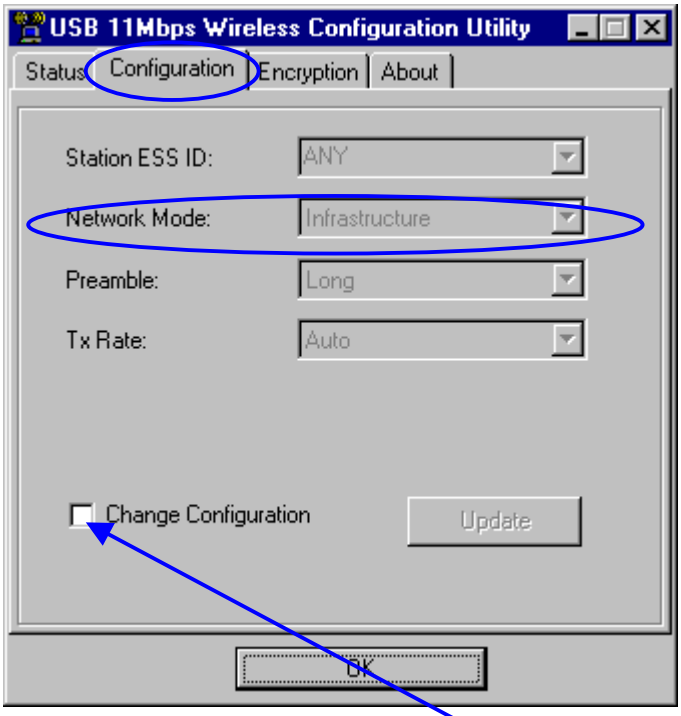


Checking the Wireless Adapter Configuration

1. Select **Start** > **Programs** > **USB 11Mbps Wireless Network > Wireless configuration.**



2. The **Configuration Utility** screen displays. Select the **Configuration Tab.**



3. Note the setting of **Network Mode**. It should be set to **Infrastructure** mode when there is an Access Point in the network. Otherwise, it should set to **Ad Hoc**.
4. To change any settings, check the box labeled **Change Configuration**, and then click the arrow in any drop down list box you would like to change.
5. Highlight the desired setting, click the **Update** button, and then click **OK**.

RouteFinder™

Chapter 5
Networking Basics

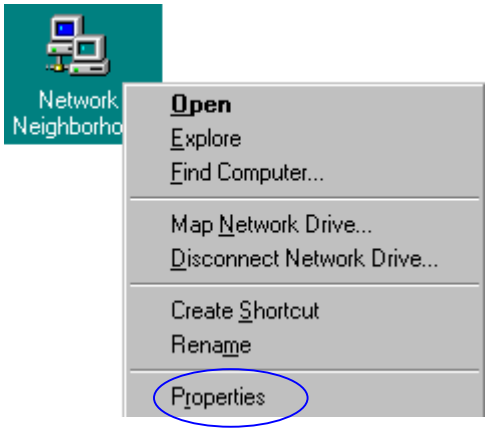
MultiTech® Systems

Chapter 5 - Networking Basics

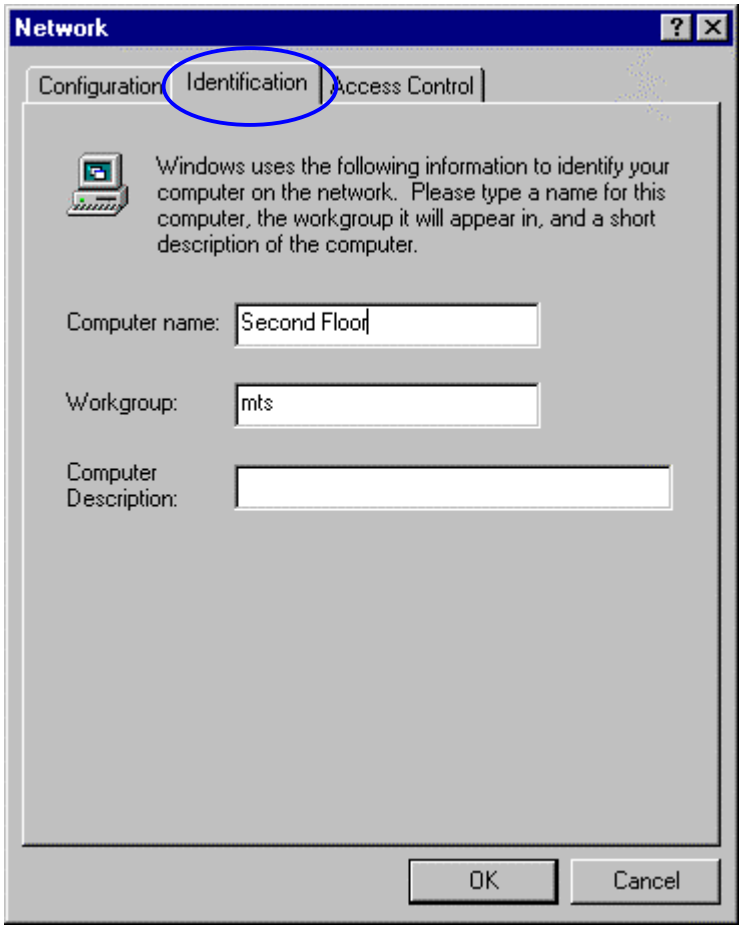
Computer Identification

If you had previously named your Windows 98/ME computers for easy network identification, you may need to verify that each computer has a unique name and common workgroup name in order to share files and printers. The following directions are for Windows 98 and Me. To find comparable directions for other operating systems, refer to Windows Help.

1. On your Desktop, right-click the icon **Network Neighborhood** and select **Properties** from the menu.



2. The **Network** screen displays. Click the Identification Tab

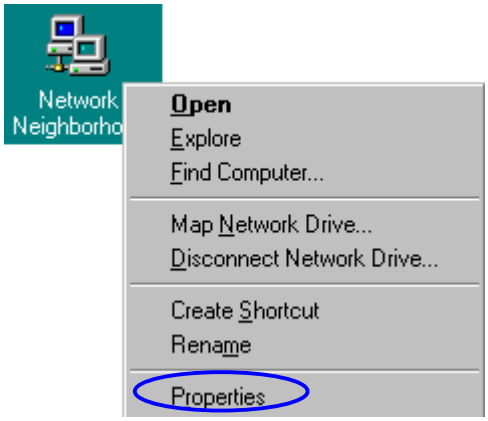


3. Type a name in the **Computer Name** box that will identify this PC or laptop for you. This name allows other computers on your network to communicate with this computer. Each computer's name must be unique on for each network or confusion will result. The name can be up to 15 characters with no spaces.
4. Type a name the **Workgroup** box that you would like to assign to the workgroup sharing files and printers. All of the computers on your network must have the same Workgroup name.
5. The **Computer Description** box is an optional field. You can use it for entering a description that will help you identify this computer on your network.
6. Once all the information is entered, click the **Close** button.
7. Repeat this process for each computer on your network to ensure that they all have a unique **Computer Name** and the same **Workgroup** name.

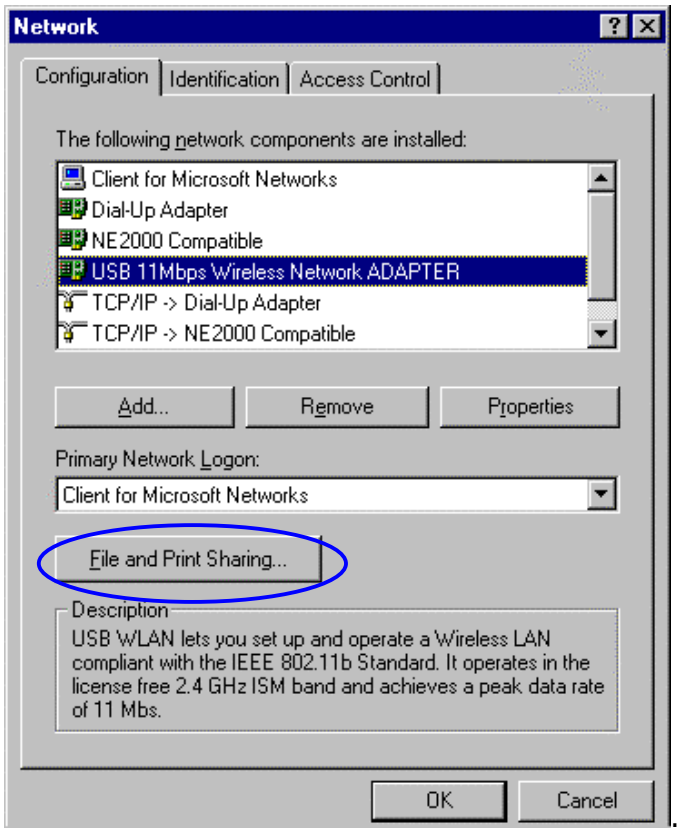
Sharing Files

Once your PCs or laptops are connected together and identified on a network, you can now open and save files between or among your computers. You will be able to specify folders or disk drives to share and even password protect them. The steps below show you how to share specific files and folders with other computers on your network.

1. On your Desktop, right-click the icon **Network Neighborhood** and select **Properties** from the context menu.

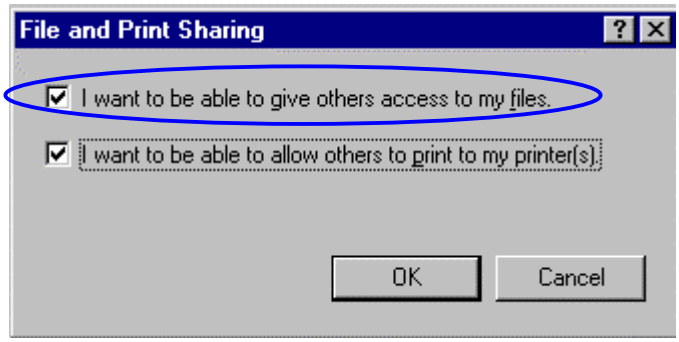


2. The **Network** dialog box displays. Most of your computer network settings will be accomplished by using this dialog box. This dialog box can also be accessed by selecting the **Control Panel,** and then selecting **Network.**


Network
Configuration
Identification
Access Control
The following network components are installed:
Client for Microsoft Networks
Dial-Up Adapter
NE2000 Compatible
USB 11Mbps Wireless Network ADAPTER
TCP/IP -> Dial-Up Adapter
TCP/IP -> NE2000 Compatible
Add...
Remove
Properties
Primary Network Logon:
Client for Microsoft Networks
File and Print Sharing...
Description
USB WLAN lets you set up and operate a Wireless LAN compliant with the IEEE 802.11b Standard. It operates in the license free 2.4 GHz ISM band and achieves a peak data rate of 11 Mbs.
OK
Cancel

3. Click the **File and Print Sharing** button.

4. The **File and Print Sharing** dialog box displays. Check the box **I want to be able to give others access to my files**.


File and Print Sharing
I want to be able to give others access to my files.
I want to be able to allow others to print to my printer(s).
OK
Cancel

5. Click **OK** on the **File and Print Sharing** dialog box.
6. Click **OK** on the **Network** dialog box.

   Note: Your system may prompt you to provide the Windows 98 installation CD or to direct Windows to the proper location of the installation files. It may also prompt you to reboot. Follow any of these directions that may appear.

Setting Sharing Levels of Access

After the sharing utility is set up, you can set the access level to your files that others will have. Access can be set for a particular file(s) or disk drive(s) as well as all files and drives.

Types of Access

Full	Allows others on your network the to open, read, write, save, copy, move, and delete files on the disk or in the folder.
Read-Only	Allows others on your network to lonely open and read the files on the disk or in the folder.
Depends on Password	Allows others on your network access to your files and drives conditional upon inputting a password.

The process for setting levels of access to files and drives are the same.

1. Using the **Windows Explorer** or the icon **My Computer** on your desktop, navigate to the disk drive or folder you want to share.
2. Right-click on the disk drive or folder icon and select **Sharing**.
3. Select **Share As** to set the parameters for sharing this particular disk drive or folder.
4. In the **Share Name** box, enter any name that helps you to identify the disk drive or folder you are sharing. Note that entering the name of the location or file may help especially as more resources on your network are shared.
5. The **Comment** box is optional. You could use this field to list the type of access or names of those who have access.
6. **Access Type** sets the level of access allowed (full, read-only, or depend on password)
7. The **Passwords** field allows you to apply a level of security to your shared drives and folders. Other users on your network will be required to enter the password you designate here before they can access the drive or folder. You can set two levels of security by adding a second level password. Leaving the **Password** boxes empty gives everyone on the network access to the drive or folder.
8. Click **OK** to continue. You will be prompted to enter the password(s) you provided for verification. Retype the password(s) just as you entered them the first time.
9. The drive or folder can now be accessed from another computer on your network. To do this, the users will:
   - Double-click the desktop or Windows Explorer icon **My Computer**.
   - Navigate to the computer with the shared drive or folder (use the Computer Name to identify it - see the **Computer Identification** section above), and double-click. The shared drives or folders display. Double-click on one. If a password is required, the user will be prompted for the password.

To make this process easier, Windows allows you to map shared drives and folders to a drive letter on another computer. For example:

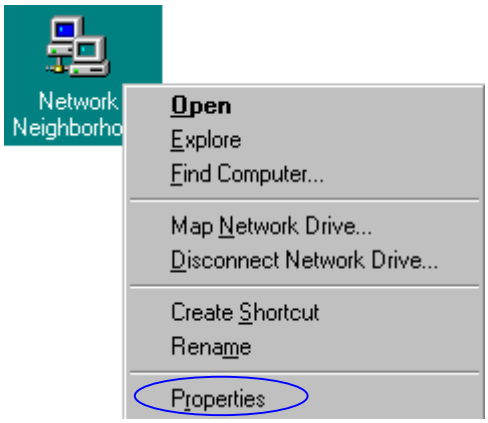
On the computer where you will be accessing a shared folder from another computer, go to the icon **My Computer** and right-click. Select **Map Network Drive** where you will then be able to assign an available drive letter. If you check **Reconnect at logon,** Windows will make this network drive available each time you start your computer.

Sharing Printers

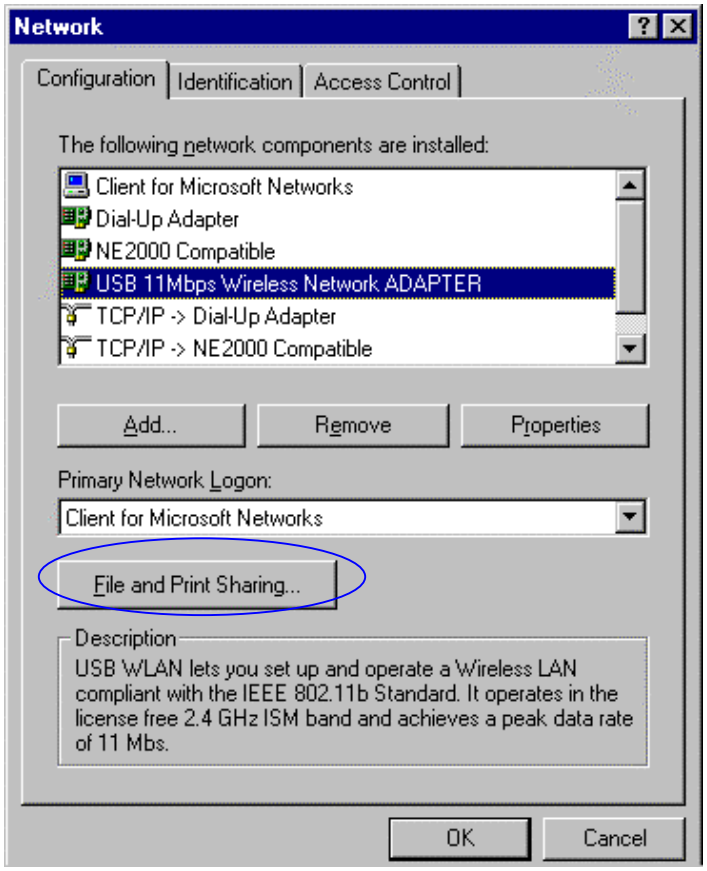
The Sharing Printers function allows a printer connected to one computer to be shared by all other computers on your network. If you have more than one printer, they can all be shared.

These steps below will enable you to print using other computers on your network.

1. Right-click the icon **Network Neighborhood** on your desktop and select **Properties** from the context menu.



2. The Network Configuration dialog box opens. Click the **File and Print Sharing** button.

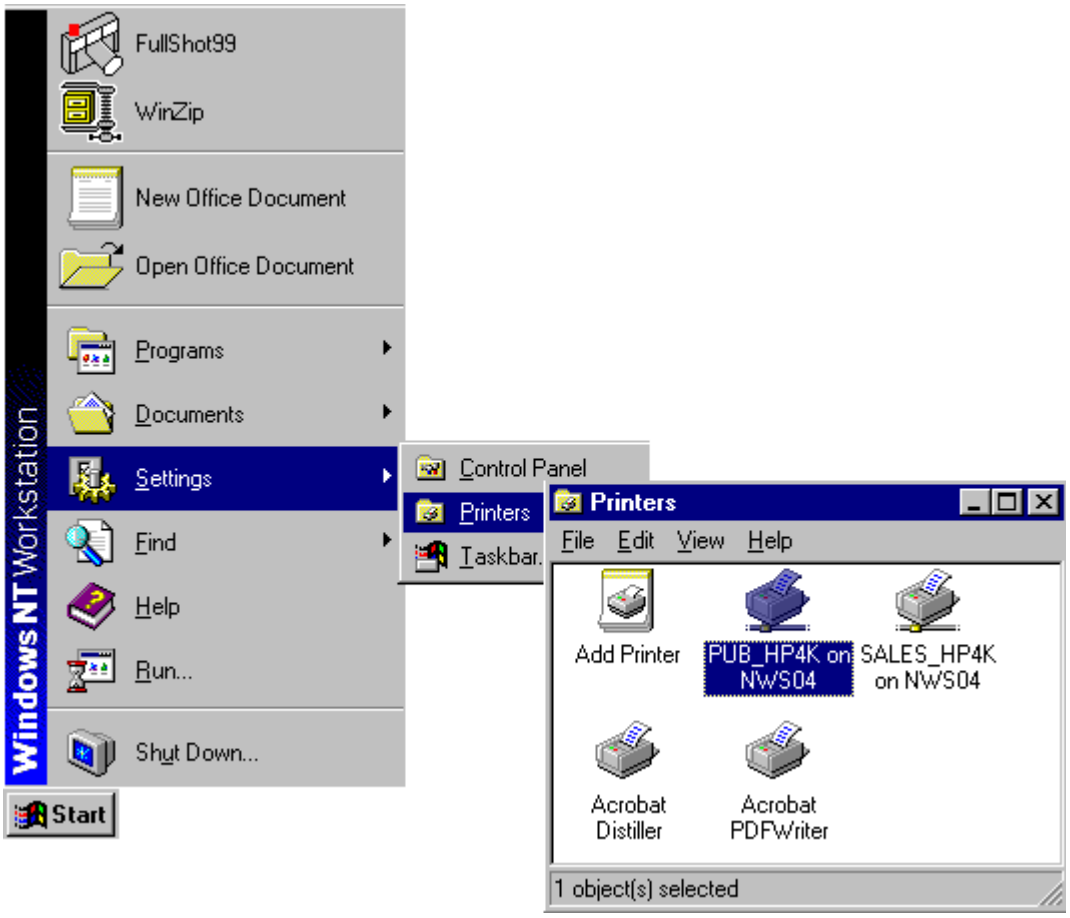

Network
Configuration
Identification
Access Control
The following network components are installed:
Client for Microsoft Networks
Dial-Up Adapter
NE2000 Compatible
USB 11Mbps Wireless Network ADAPTER
TCP/IP -> Dial-Up Adapter
TCP/IP -> NE2000 Compatible
Add...
Remove
Properties
Primary Network Logon:
Client for Microsoft Networks
File and Print Sharing...
Description
USB WLAN lets you set up and operate a Wireless LAN compliant with the IEEE 802.11b Standard. It operates in the license free 2.4 GHz ISM band and achieves a peak data rate of 11 Mbs.
OK
Cancel

3. The **File and Print Sharing** dialog box displays. Select **I want to be able to allow others to print to my printer(s)**.
4. Click **OK** on the **File and Print Sharing** dialog box.
5. Click **OK** on the **Network** dialog box.

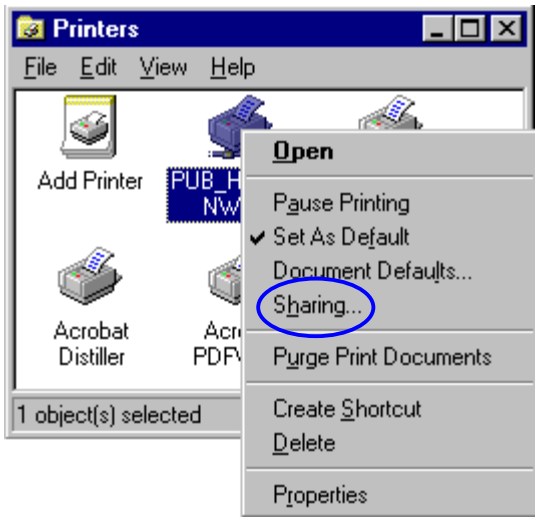
   Note: Your system may prompt you to provide the Windows 98 installation CD or to direct Windows to the proper location of the installation files. It may also prompt you to reboot. Follow any of these directions that may appear.

Selecting a Shared Printer

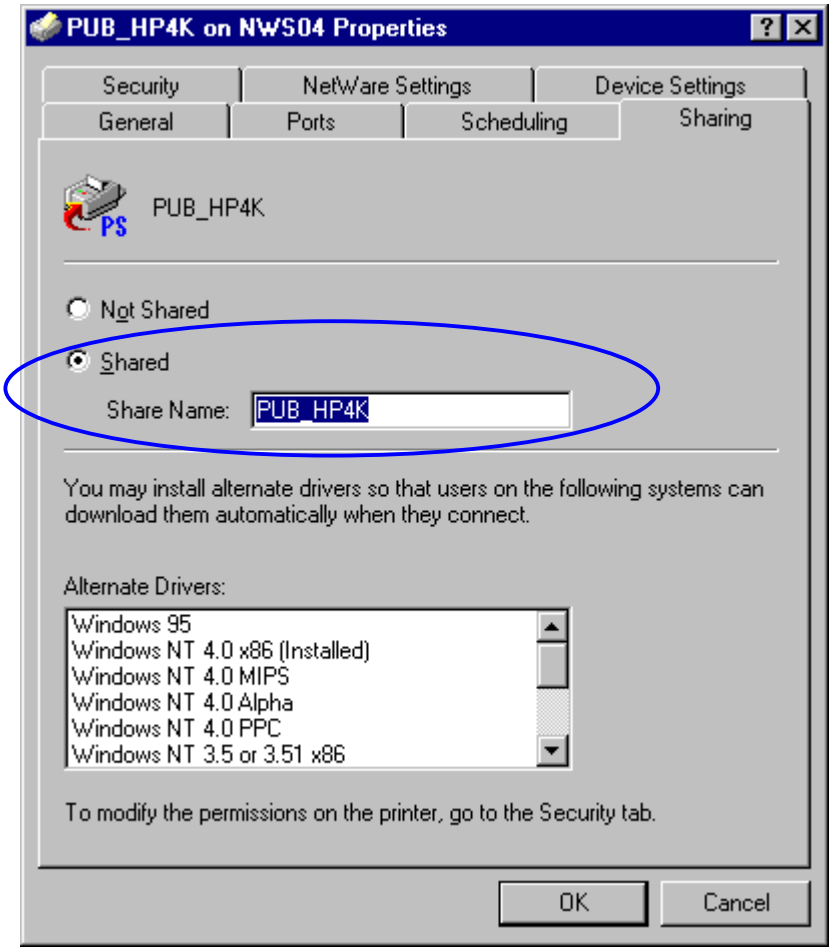
1. Now that the Shared Printers function is set up, you can share any installed printers connected to this computer with other computers on your network. Select **Start** > **Settings** > **Printers**.



2. Right-click on the printer that you want to share with others on the network. Then select **Sharing**.

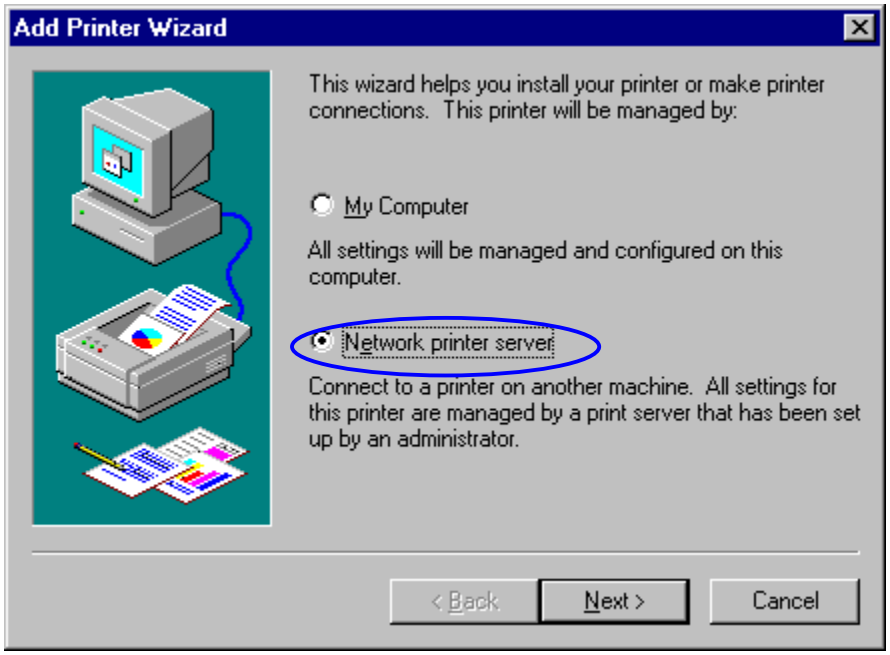


3. Click **Share.** The **Printer Properties** dialog box displays. Click **Shared**, and enter a **Share Name** to identify the printer to other computers on the network. **Comment** and **Password** are optional. Then click **OK**.



4. For a computer to access a Network Printer, the device driver or software for that printer must be installed and must pointed to the proper location of the printer.
   - Go to a computer that does not have the printer connected to it. Select **Start** > **Settings** > **Printers**.
   - Double-click the **Add Printer** icon.

- The **Add Printer Wizard** displays. Click the button next to **Network Printer Server**, and then click **Next**.


Add Printer Wizard
This wizard helps you install your printer or make printer connections. This printer will be managed by:
My Computer
All settings will be managed and configured on this computer.
Network printer server
Connect to a printer on another machine. All settings for this printer are managed by a print server that has been set up by an administrator.
< Back
Next >
Cancel

- The Choose **Network printer**. Click **Next**.
- The **Connect to Printer** screen displays. Identify the location of the Network Printer.
  If you know the name of the computer and the Share Name of the printer, you can type it into the **Network path or queue name** box.

  However, it is easier to click the **Browse** button and navigate to the location of the printer. Select the desired printer and click **OK.**

  Finish the installation by continuing the **Add Printer Wizard** normally.

5. You may now use the Network Printer as if it were connected directly to each computer.

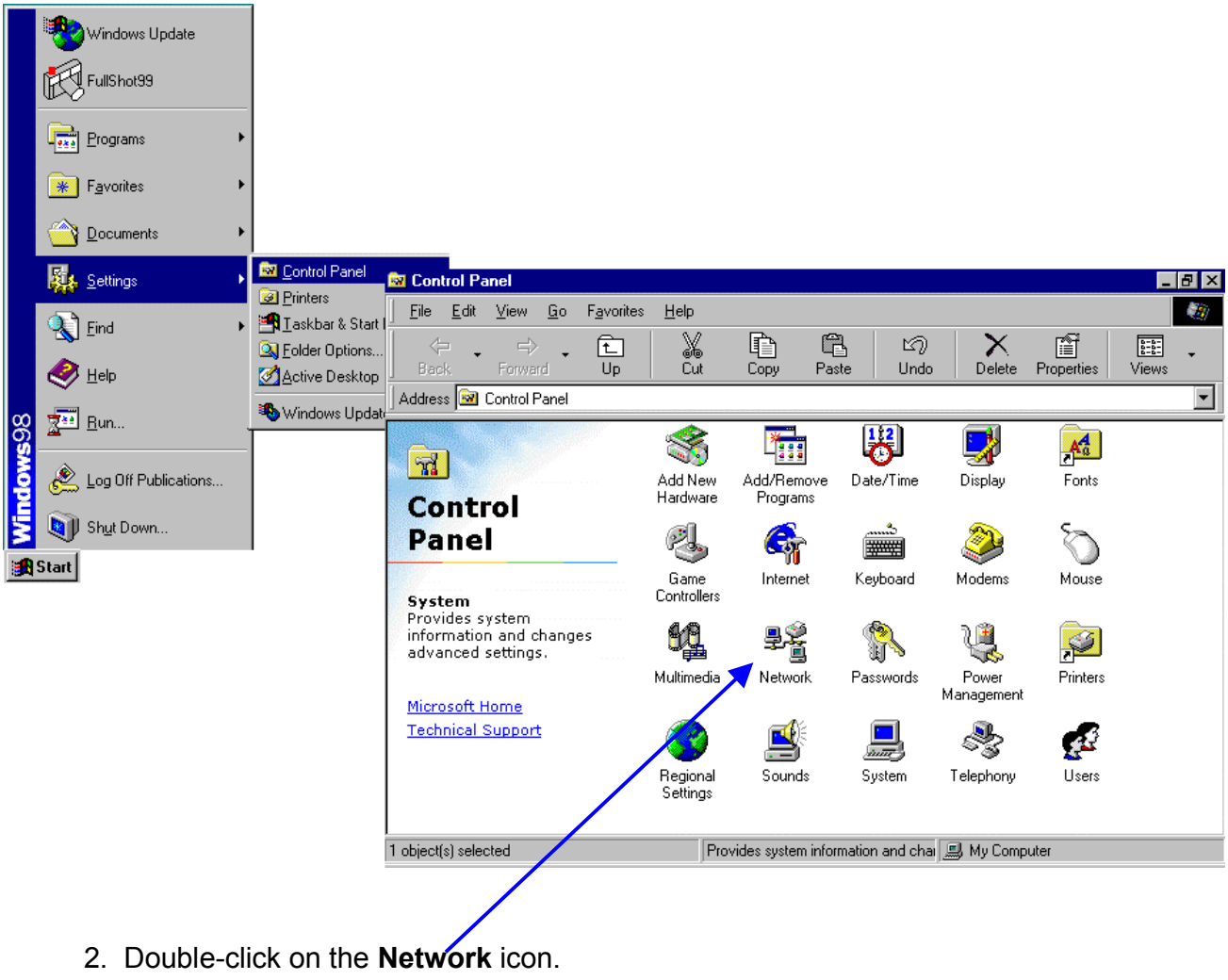
Note: The printer must be turned on for other network computers to use it.

How to Install TCP/IP

By default, Windows 98/ME will install TCP/IP automatically.

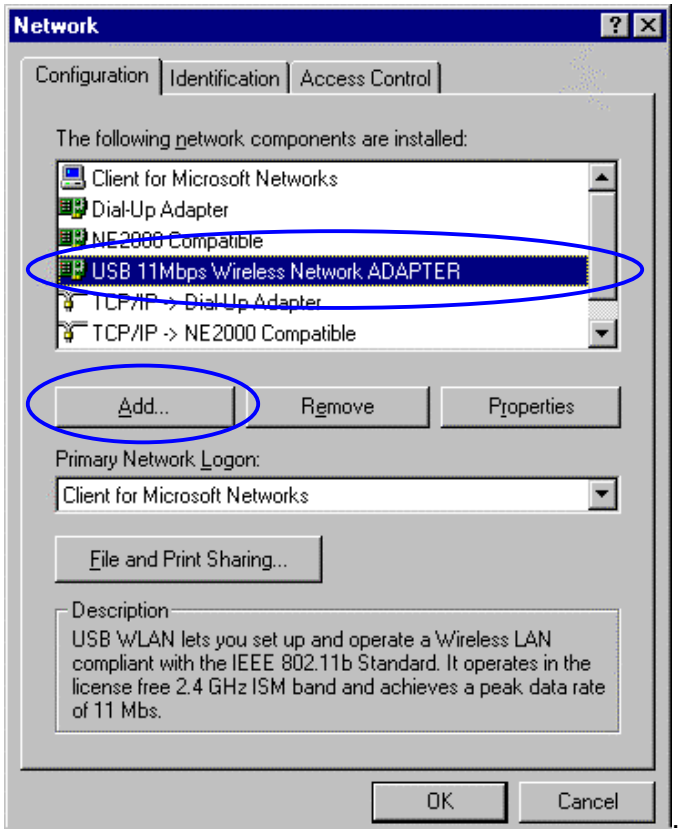
To install it manually, follow these steps:

1. Select **Start** > **Settings** > **Control Panel**.

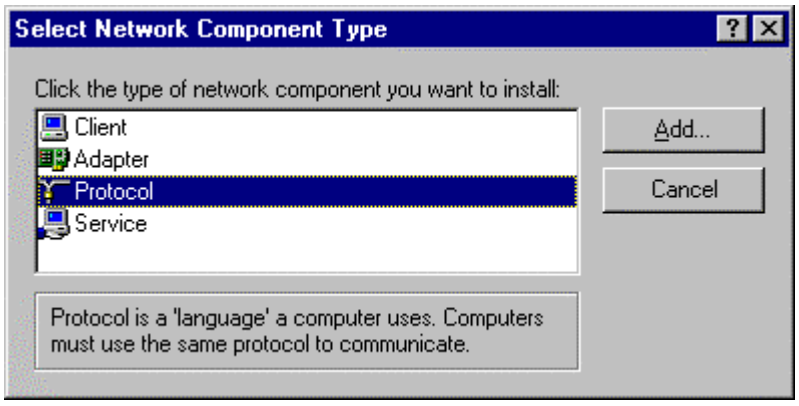


2. Double-click on the **Network** icon.

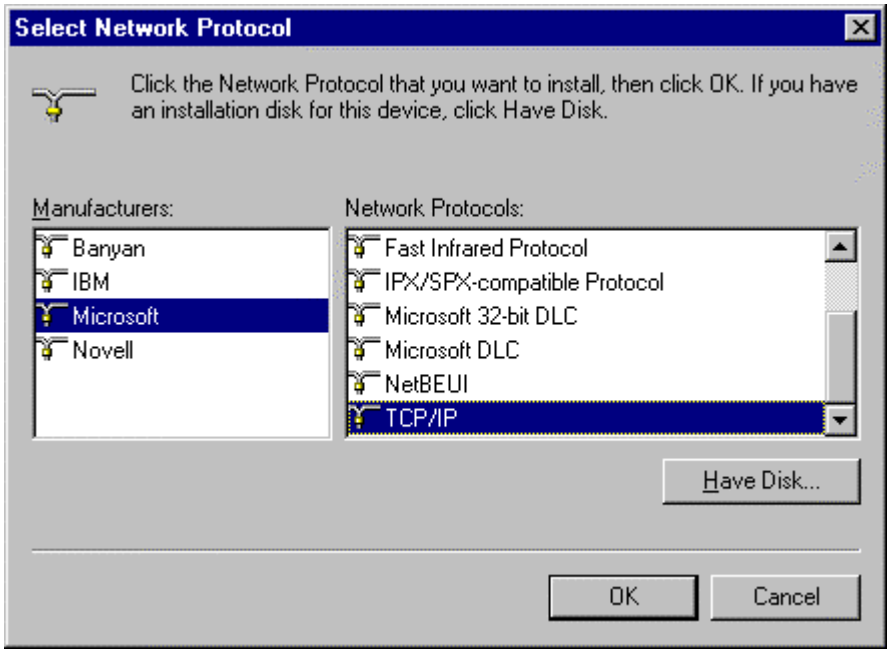
3. The **Network Configuration** dialog box displays. Highlight the **USB 11Mbps Wireless Network Adapter**. Click the **Add** button.


Network
Configuration
Identification
Access Control
The following network components are installed:
Client for Microsoft Networks
Dial-Up Adapter
NE2000 Compatible
USB 11Mbps Wireless Network ADAPTER
TCP/IP -> Dial-Up Adapter
TCP/IP -> NE2000 Compatible
Add...
Remove
Properties
Primary Network Logon:
Client for Microsoft Networks
File and Print Sharing...
Description
USB WLAN lets you set up and operate a Wireless LAN compliant with the IEEE 802.11b Standard. It operates in the license free 2.4 GHz ISM band and achieves a peak data rate of 11 Mbs.
OK
Cancel

4. The **Select Network Component Type** dialog box displays. Select **Protocol**, and then click the **Add** button.



5. The **Select Network Protocol** dialog box displays. Select **Microsoft** from the column on the left side of the screen, and then select **TCP/IP** from the column on the right side of the screen. Click **OK**.



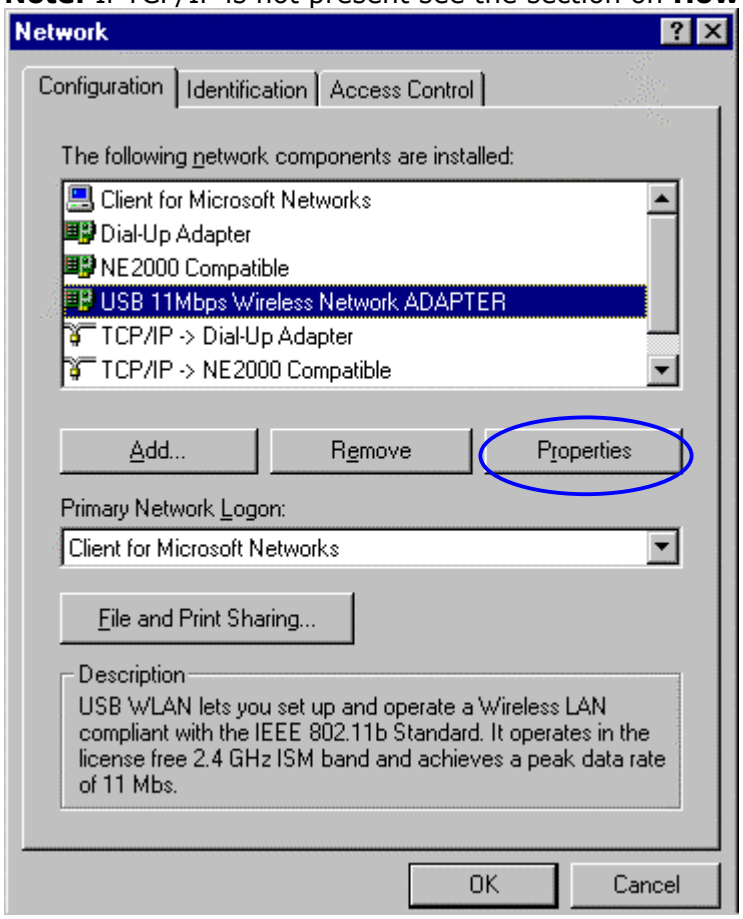
6. The TCP/IP protocol is now installed.

Configuring a Dynamic IP Address

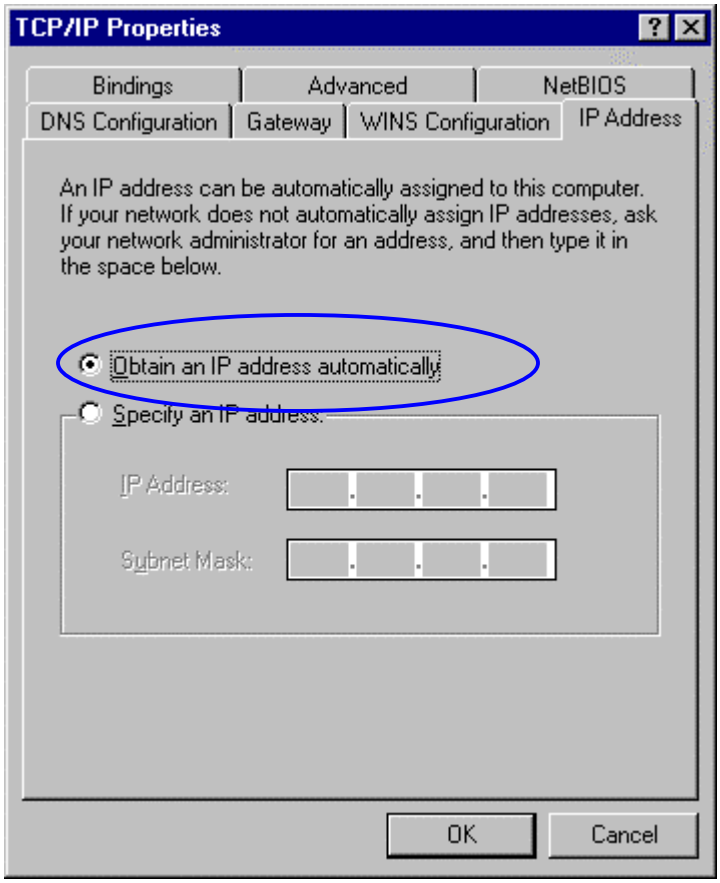
When the drivers were installed, the default for the IP Address was set to obtain IP dynamically through a DHCP server.

If you need to check or change the settings, complete the following steps:

1. Select **Start** > **Settings** > **Control Panel.**
2. Double-click on **Network**.
3. The **Network** dialog box displays. Highlight **TCP/IP for USB 11Mbps Wireless Network,** and then click the **Properties** button.
   Note: If TCP/IP is not present see the section on **How to Install TCP/IP**.

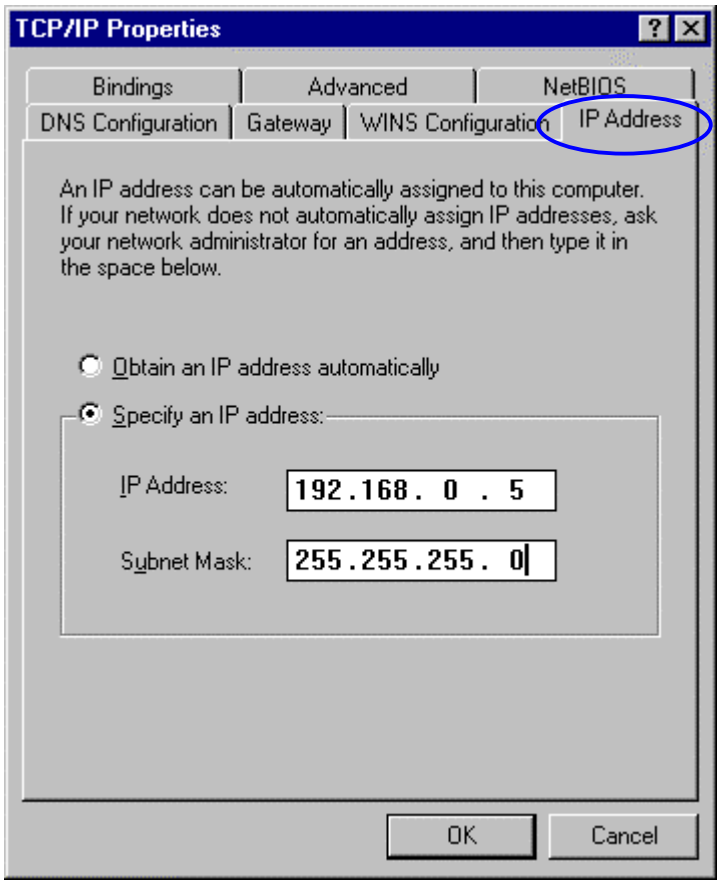

Network
Configuration
Identification
Access Control
The following network components are installed:
Client for Microsoft Networks
Dial-Up Adapter
NE2000 Compatible
USB 11Mbps Wireless Network ADAPTER
TCP/IP -> Dial-Up Adapter
TCP/IP -> NE2000 Compatible
Add...
Remove
Properties
Primary Network Logon:
Client for Microsoft Networks
File and Print Sharing...
Description
USB WLAN lets you set up and operate a Wireless LAN compliant with the IEEE 802.11b Standard. It operates in the license free 2.4 GHz ISM band and achieves a peak data rate of 11 Mbs.
OK
Cancel

4. The **TCP/IP Properties** dialog box displays. Choose the **IP Address** tab. Then select **Obtain an IP address automatically**, and then click **OK**.


TCP/IP Properties
Bindings
Advanced
NetBIOS
DNS Configuration
Gateway
WINS Configuration
IP Address
An IP address can be automatically assigned to this computer. If your network does not automatically assign IP addresses, ask your network administrator for an address, and then type it in the space below.
Obtain an IP address automatically
Specify an IP address:
IP Address:
Subnet Mask:
OK
Cancel

5. The Network Properties dialog box displays again. Just click **OK**.
6. The Windows system will ask you to reboot. Click **Yes**.

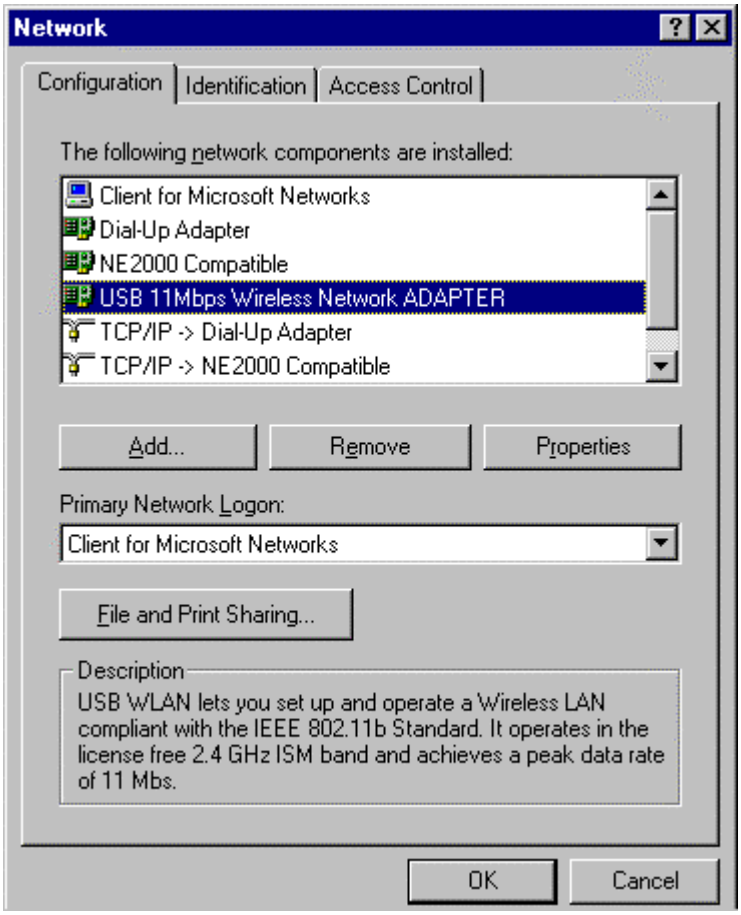
7. The TCP/IP dialog box displays. Choose the **IP Address tab**.



8. Select **Obtain an IP Address Automatically**, and click **OK**.
9. When the **Network Properties** dialog box comes back up, click **OK**.
10. The Windows system will ask you to reboot. Click **Yes**.

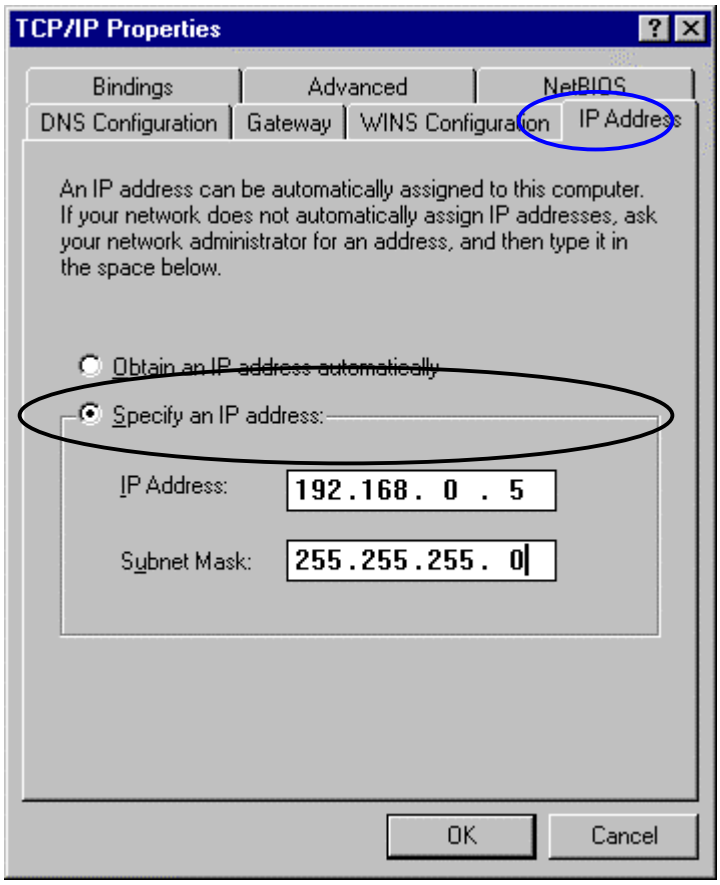
Configuring a Static IP Address

1. Select **Start** > **Settings** > **Control Panel**
2. Double-click on **Network**.
3. Highlight **TCP/IP for USB 11Mbps Wireless Network** and click the **Properties** button.


Network
Configuration
Identification
Access Control
The following network components are installed:
Client for Microsoft Networks
Dial-Up Adapter
NE2000 Compatible
USB 11Mbps Wireless Network ADAPTER
TCP/IP -> Dial-Up Adapter
TCP/IP -> NE2000 Compatible
Add...
Remove
Properties
Primary Network Logon:
Client for Microsoft Networks
File and Print Sharing...
Description
USB WLAN lets you set up and operate a Wireless LAN compliant with the IEEE 802.11b Standard. It operates in the license free 2.4 GHz ISM band and achieves a peak data rate of 11 Mbs.
OK
Cancel

Note: If TCP/IP is not present see the section on **How to Install TCP/IP**.

4. The **TCP/IP Properties** dialog box displays. Choose the **IP Address** tab, and select **Specify an IP Address.**

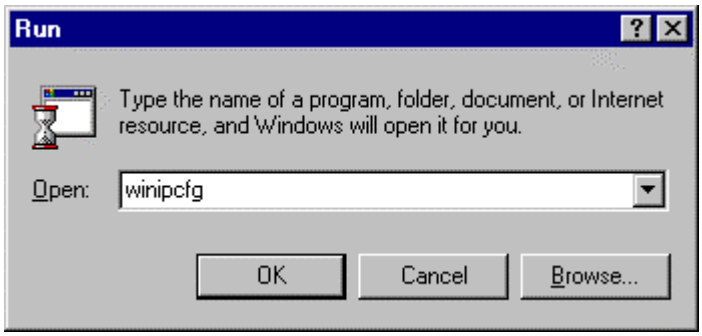


5. Enter an IP Address in the **IP Address** field.
   The suggested IP Range is 192.168.0.2 to 192.168.0.254
   Note: IP Addresses must be assigned sequentially to each computer.

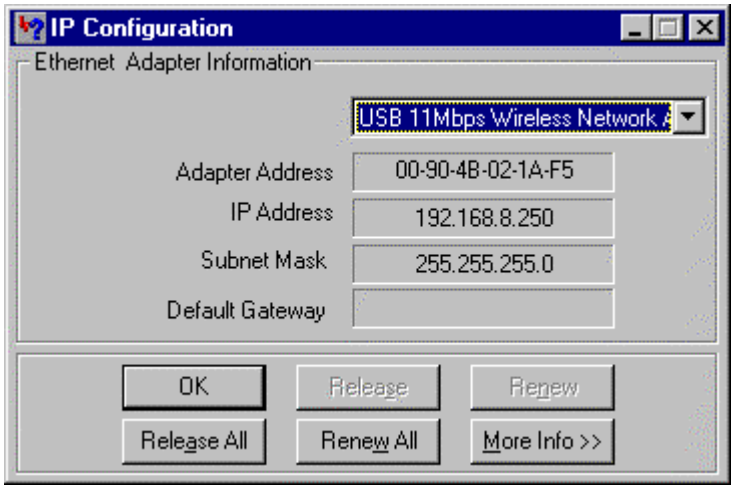
   Enter a Subnet Mask number is the **Subnet Mask** field.
   The suggested Subnet Mask is 255.255.255.0
6. Click **OK**.
7. The **Network Properties** dialog box displays again. Just click **OK**.
8. The Windows system will ask you to reboot. Click **Yes**.

Checking TCP/IP Address of the Wireless Adapter

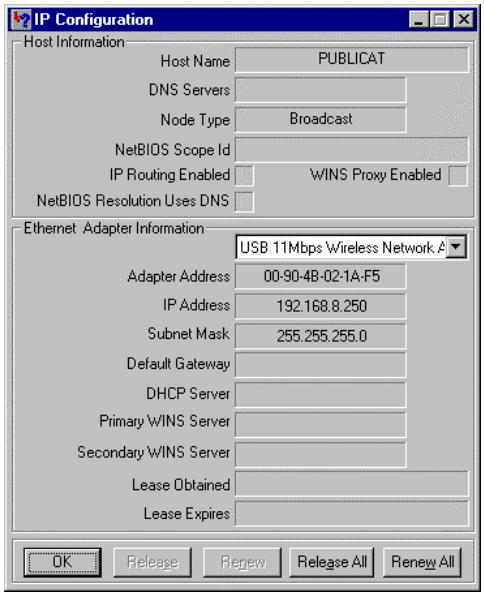
1. Click the **Start** button, and then click **Run**.
2. The **Run** dialog box displays. Type **winipcfg** in the **Open** box, and click **OK**.



3. The **IP Configuration** dialog box displays. The IP address will default into the **IP Address** box.



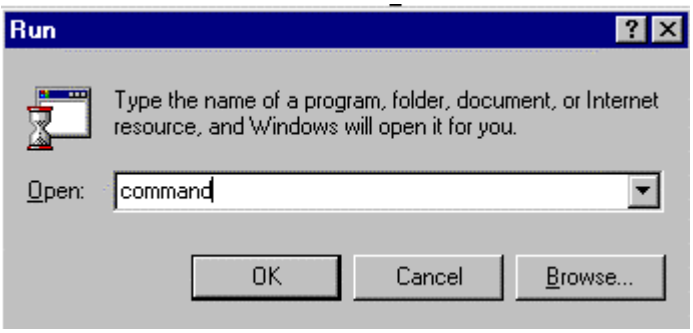
4. Click the **More Info** button to display additional IP information.



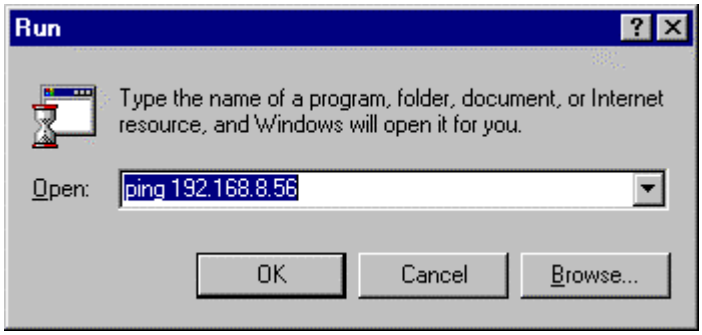
Checking the Connection by Pinging

Click the **Start** button, and then click **Run**.

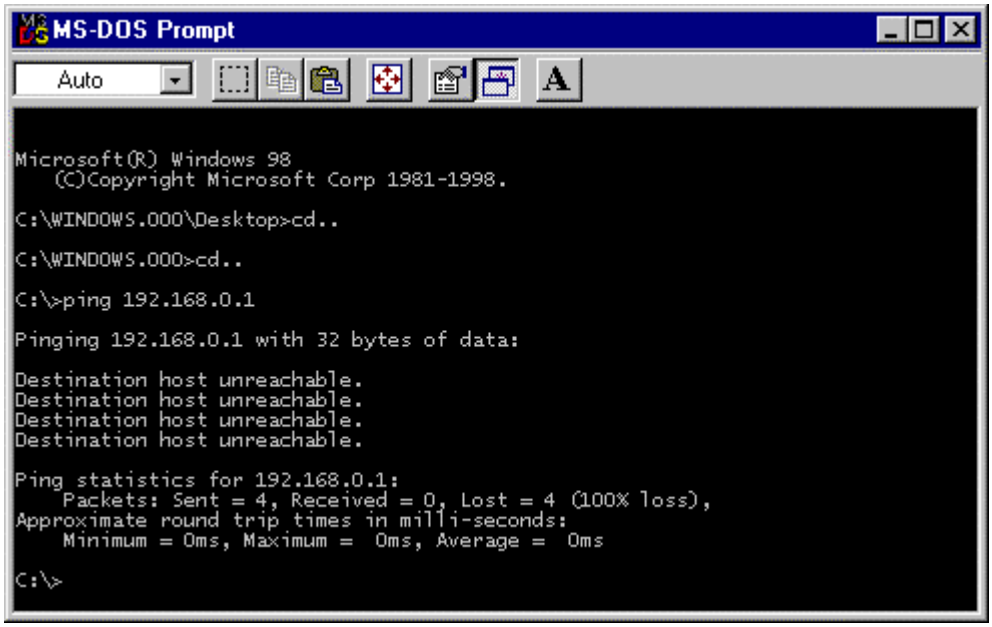
1. The **Run** dialog box displays. Type **command** in the **Open** box. Then click **OK**.



1. This takes you to the **Run** dialog box, which is now set to receive a DOS prompt.
3. Type **ping 192.168.0.1**, which is the IP address of the Gateway in this case. Then press the **Enter** key.



4. A successful ping will show four replies:



RouteFinder™

Appendixes

MultiTech® Systems

Appendix A - Technical Specifications of the RF802USB

Product Name	USB 11 Mbps Wireless Network Adapter
Model Number	RF802USB
Hardware Compatibility	IBM-compatible PC with USB port
Host Interface	USB B-type to PC
Dimensions	4 x 2.8 x ¾ inches (10 x 7.2 x 2 mm)
Frequency Band	2.400 ~ 2.4825GHz (subject to local regulations)
Number of Channels	USA and Canada – 11 France – 4 Most European countries – 13 Japan – 13 (optional 14)
Operating Voltage	5V
Spreading	DSSS (Direct Sequence Spread Spectrum)
Data Rate	11Mbps, 5.5Mbps, 1Mbps
Transmit Power	Nominal Temp Rate: 13 dBm Extended Temp Rate: 10 dBm min. Transmit Power, 2.7v to 3v: 10 dBm min.
Receive Sensitivity	***Nominal Temp Rate:*** 1 Mbps 10-5 BER @ -87 dBm, minimum 5.5 Mbps 10-5 BER @ -84 dBm, minimum 11 Mbps 10-5 BER @ -81 dBm, minimum ***Extended Temp Rate:*** 1 Mbps 10-5 BER @ -84 dBm minimum 5.5 Mbps 10-5 BER @ -81 dBm minimum 11 Mbps 10-5 BER @ -78 dBm minimum
Modulation	11Mbps and 5.5 Mbps CCK; 2 Mbps: DQPSK; I Mbps: DBPSK
Security	40-bit and 128-bit WEP Encryption
Antenna	External 1 dBi dipole antenna
LED Indicators	Power, Link
Drivers	Windows 95/98/2000, NT 4.0, Linux
Standards	IEEE 802.11b, Wi-Fi compliant
Media Access Protocol	CSMA/CA with ACK
Warranty	1 year, optional 3 years
Temperature Range	-10 ~ 50° C (Operating), -20 ~ 70 ° C (Storing)
Humidity	Max. 95% Non-condensing
Operating Range	Open Space: 100 – 300m; Indoor: 35 – 100m
Roaming	Full mobility and seamless roaming from cell to cell and across access points (subject to access point)
Network Protocol	TCP/IP, IPX, NDIS3, NDIS4
Management Ability	Link Config for network join and diagnosis

EMC Certification	FCC Part 15 Class in US, ETSI 300.328 and CE EMC-EEC in Europe, ARIB-Telec in Japan
Packaging	Generic, Multi-Tech Systems, Inc., private labeling optional
Data Encryption	64 bit and 128 Bit WEP Encryption
Supported Bit Rates	11 Mbps, 5.5 Mbps, 2 Mbps, 1 Mbps
Utility Software	Configuration Utility Software
Standards	IEEE 802.11b
Transport Protocols	TCP/IP IPX/SPX NetBEUI
TCP/IP Protocols	BOOTP SNMP Telnet DHCP FTP
System Requirements	IBM compatible with Pentium 100 or faster processor USB port
Supported Operating Systems	Windows 98 Windows Me Windows 2000
Data Rate	11 : CCK 5.5 : CCK 2 : DQPSK 1 : DBSK
Key Management	Automatic Dynamic Key Allocation (ADKA) through public key
Range	Indoor – per cell approximately 35 to 100 meters Outdoor – per cell approximately 100 to 300 meters
Diagnostic LED	Power, Activity
Power Specifications	Operating Voltage: +5V, DC (+/-) 5%
Transmit Power	Nominal Temp. Range: 17 dBm Extended Temp. Range: 14 dBm min. Transmit Power, 2.7v to 3v: 14 dBm min.
Network Architecture	Supports Ad-Hoc Mode (Peer-to-Peer without Access Point) or Infrastructure Mode (Communications to wired networks via Access Points with Roaming) Compliant with IEEE 802.11b
Antenna	External antenna supporting diversity Mobility: Seamless roaming across cell boundaries with handover

Appendix B - Uninstall RF802USB Software

If you want to uninstall the **Wireless USB** software under the Windows operating system, complete the following steps:

Uninstall RF802USB in Windows 98

1. Click the **Start** button→ **Settings** → **Control Panel** → **Add/Remove** → **Remove Wireless USB RF802USB**.
2. Click the **Start** button → **Programs** → **Windows Explorer** → **Disk C** → **Windows** → **INF file** → **Other** → Then remove the **USB inf** file related to the RF802USB.
3. Click the **Start** button → **Run** → type "**regedit**" command → **Local machine** → **Enum** → **USB** → remove file "**VID- 03EB&PID7602**".
4. Click the **Start** button → **Run** → type " **regedit** " command, → **Local machine** → **system** → **current control set** → **services**→ **Class** → **Net** → remove **USB** file related to the RF802USB.
5. Click the **Start** button → **Settings** → **Taskbar & Start Menu** → **Start Menu Program** → **remove** → choose **Wireless USB (**related to the RF802USB) → **remove**.
6. **Important:** Restart your computer to make the changes effective before you reinstall the driver.

Uninstall RF802USB in Windows ME

1. Click the **Start** button → **Settings** → **Control Panel** → **Add/Remove** → Remove **Wireless USB adapter** RF802USB.
2. Right-click **My Computer** on the desktop → **Properties** → **Device Manager** → **Network adapter** → Then remove **Wireless USB adapter** RF802USB.
3. Click the **Start** button → **Run** → type " **regedit** " command, → **Local machine** → **system** → **current control set** → **services** → **Class** → Net → remove **USB** file related to the RF802USB.
4. Click the **Start** button → **Run** → type " **regedit** " command, → **Local machine** → **Enum** → **USB** → remove file "**VID-03EB&PID7602**."
5. **Important:** Restart your computer to make the changes effective before you reinstall the driver.

Uninstall RF802USB in Windows 2000

1. Right click on the **My Computer** icon located on the desktop → **Properties** → click the **Hardware** tab → **Device Manager**.
2. Click **Network adapter** → Then remove **Wireless USB adapter** RF802USB.
3. Click **Windows Explorer** → **C:\Program Files** → Remove **Wireless USB adapter** RF802USB.
4. **Start** → **Run** → type " **regedit** " command, → **Local machine** → **System** → **Current control set** → **Enum** → remove **USB** RF802USB.

Important: Restart your computer to make the changes effective before you reinstall the driver.

Appendix C - Multi-Tech Systems, Inc. Warranty & Repairs Policies

Warranty

Multi-Tech Systems, Inc., (hereafter "MTS") warrants that its products will be free from defects in material or workmanship for a period of two, five, or ten years (depending on model) from date of purchase, or if proof of purchase is not provided, two, five, or ten years (depending on model) from date of shipment.

MTS MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED.

This warranty does not apply to any products which have been damaged by lightning storms, water, or power surges or which have been neglected, altered, abused, used for a purpose other than the one for which they were manufactured, repaired by Customer or any party without MTS's written authorization, or used in any manner inconsistent with MTS's instructions.

MTS's entire obligation under this warranty shall be limited (at MTS's option) to repair or replacement of any products which prove to be defective within the warranty period or, at MTS's option, issuance of a refund of the purchase price. Defective products must be returned by Customer to MTS's factory – transportation prepaid.

MTS WILL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES, AND UNDER NO CIRCUMSTANCES WILL ITS LIABILITY EXCEED THE PRICE FOR DEFECTIVE PRODUCTS.

Repair Procedures for U.S. and Canadian Customers

In the event that service is required, products may be shipped, freight prepaid, to our Mounds View, Minnesota factory:

Multi-Tech Systems, Inc.
2205 Woodale Drive
Mounds View, MN 55112
Attn: Repairs, Serial # _____

A Returned Materials Authorization (RMA) is not required. Return shipping charges (surface) will be paid by MTS.

Please include, inside the shipping box, a description of the problem, a return shipping address (must have street address, not P.O. Box), your telephone number, and if the product is out of warranty, a check or purchase order for repair charges.

For out of warranty repair charges, go to www.multitech.com/documents/warranties.

Extended two-year overnight replacement service agreements are available for selected products. Please call MTS at (888) 288-5470, extension 5308 or visit our web site at http://www.multitech.com/programs/orc/ for details on rates and coverage's.

Please direct your questions regarding technical matters, product configuration, verification that the product is defective, etc., to our Technical Support department at (800) 972-2439 or email tsupport@multitech.com. Please direct your questions regarding repair expediting, receiving, shipping, billing, etc., to our Repair Accounting department at (800) 328-9717 or (763) 717-5631, or email mtsrepair@multitech.com.

Repairs for damages caused by lightning storms, water, power surges, incorrect installation, physical abuse, or user-caused damages are billed on a time-plus-materials basis.

Repair Procedures for International Customers (Outside U.S.A. and Canada)

Your original point of purchase Reseller may offer the quickest and most economical repair option for your Multi-Tech product. You may also contact any Multi-Tech sales office for information about the nearest distributor or other repair service for your Multi-Tech product.

http://www.multitech.com/COMPANY/offices/DEFAULT.ASP

In the event that factory service is required, products may be shipped, freight prepaid to our Mounds View, Minnesota factory. Recommended international shipment methods are via Federal Express, UPS, or DHL courier services, or by airmail parcel post; shipments made by any other method will be refused. A Returned Materials Authorization (RMA) is required for products shipped from outside the U.S.A. and Canada. Please contact us for return authorization and shipping instructions on any International shipments to the U.S.A. Please include, inside the shipping box, a description of the problem, a return shipping address (must have street address, not P.O. Box), your telephone number, and if the product is out of warranty, a check drawn on a U.S. bank or your company's purchase order for repair charges. Repaired units shall be shipped freight collect, unless other arrangements are made in advance.

Please direct your questions regarding technical matters, product configuration, verification that the product is defective, etc., to our Technical Support department nearest you or email tsupport@multitech.com. When calling the U.S., please direct your questions regarding repair expediting, receiving, shipping, billing, etc., to our Repair Accounting department at
+(763) 717-5631 in the U.S.A., or email mtsrepair@multitech.com.

Repairs for damages caused by lightning storms, water, power surges, incorrect installation, physical abuse, or user-caused damages are billed on a time-plus-materials basis.

Repair Procedures for International Distributors

Procedures for International Distributors of Multi-Tech products are on the distributor web site:

http://www.multitech.com/PARTNERS/login/

Copyright © Multi-Tech Systems, Inc. 2001
10-Sep-01

Appendix D – Regulatory Information

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, (example - use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

R&TTE Compliance Statement

This equipment complies with all the requirements of the DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of 9 March 1999 on radio equipment and telecommunication terminal Equipment and the mutual recognition of their conformity (R&TTE).

The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal Equipment and Satellite Earth Station Equipment) As of April 8, 2000.

Index

A

About Tab, 22
Ad Hoc, 19

C

Change Configuration, 18
Checking TCP/IP Address of the Wireless Adapter, 47
Checking the Connection by Pinging, 48
Checking the Wireless Adapter Configuration, 27
Computer Identification, 30
Configuration Tab, 18
Configuration Utility, 16
Configuring a Dynamic IP Address, 42
Configuring a Static IP Address, 45
Connecting the RF802USB to Your PC or Laptop, 13

E

Encryption Tab, 20

F

Federal Communication Commission Interference Statement, 56
Four Ways to Use the Wireless LAN Adapter, 7

H

How to Install TCP/IP, 39

I

Infrastructure, 19
Installation of the RF802USB, 12

L

LED Indicators, 7
Link Status Group, 17
Long Preamble, 19

M

Mandatory Mode, 21

N

Network Mode, 19
Networking Basics, 30

O

Open System, 21

P

Preamble, 19

R

R&TTE Compliance Statement, 56

S

Safety, 6
Selecting a Shared Printer, 36
Setting Network Properties
  Windows 2000, 14
  Windows 98/Me, 13
Setting Sharing Levels of Access, 34
Setup 1 – The Ad Hoc Network, 7
Setup 2 – The Ad Hoc Network with Internet Sharing, 8
Setup 3 – The Home Network with Multiple IPs, 9
Setup 4 – The Home Internet Network with a Residential Gateway, Firewall, or Router, 10
Shared Key, 21
Sharing Files, 32
Sharing Printers, 35
Short Preamble, 19
Signal Strength, 17
Software Installation for Windows 98/Me/2000, 12
Station ESS ID, 18
Status Tab, 17

T

Technical Specifications, 50
technical support, 2
Troubleshooting, 24
TX Rate, 19
Tx/Rx Rate Information Group, 17
Types of Access, 34

U

Uninstall RF802USB
  in Windows 2000, 53
  in Windows 98, 52
  in Windows Me, 52

V

Verifying Driver Installation, 24

W

Warranty and Repairs Policies, 54
WEP Key to Use, 21